ROYAL COMMISSION ON INDIAN CURRENCY AND FINANCE.

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APPENDICES.

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ROYAL COMMISSION ON INDIAN CURRENCY AND FINANCE.

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In law the Secretary of State in Council is responsible to Parliament for "all acts, operations and concerns which relate to the government or revenues of India, and all grants of salaries, gratuities and allowances, and all other payments and charges, out of or on the revenues of India"; and he is consequently in possession of power to "superintend, direct, and control" those matters. (Government of India Act, section 2 (2).)

2. This all-embracing power of superintendence, direction, and control has been legally affected by the Act of 1919 only in relation to those provincial subjects which have been transferred to the control of Governors acting with Ministers. In respect of these subjects there has been a statutory divestment of the powers of superintendence, direction, and control, which can now only be exercised in relation to transferred subjects for specified and strictly limited purposes. The provincial transferred subjects do not include Currency and Exchange, nor any matters connected therewith. In respect of those two subjects, therefore, in common with all other central subjects and with all reserved provincial subjects, the Secretary of State remains in law ultimately responsible to Parliament for the policy pursued, and can compel the Government of India to carry out any instructions or policy which he, acting on behalf of His Majesty's Government or Parliament, may lay down. (Government of India Act, sections 2 and 33)

3. The Government of India Act contains no provisions relating specifically to Currency and Exchange, except in so far as the provisions of section 67 (2) affect these matters by reason of their inclusion in the comprehensive expression "public debt or public revenues of India" contained in that subsection. Besides the general provisions already referred to, the Act defines the expression "revenues of India," enacts that these revenues "shall be applied for the purposes of the government of India alone," specifying what some of those purposes are (section 20), requires the sanction of the Secretary of State in Council to all grants or appropriations of any part of them (section 21), provides (sections 23, 24, 25, 26, and 27) that all parts of the revenues of India remitted to or accruing in the United Kingdom are to be paid into the Bank of England on behalf of the Secretary of State in Council, and prescribes the procedure for drawing on the Bank of England, for audit of the Home Accounts and for an annual presentation of accounts to Parliament.

4. The only other financial power of the Secretary of State in Council derived from statute law that needs to be considered in this connection is the power to raise loans in the United Kingdom. This function can be performed on behalf of the Government of India only by the Secretary of State in Council, and when performed is subject to the specific authority of Parliament (see the series of East India Loans Acts) in each case—or rather each specific loan which is raised must be covered by the authority of Parliament conveyed by Act to raise a specified sum of money for a specified purpose. The Stocks issued in pursuance of the East India Loans Acts enjoy the status of Trustee securities, and the amount of such sterling securities, the capital and interest of which is charged on the revenues of India, is, at the present time, about £240,000,000.

5. It should also be mentioned that the Secretary of State in Council is responsible for obligations incurred by way of the guarantee of certain securities issued by some of the Indian Railway Companies, pensions to retired officials, &c. The due discharge of these commitments has always led the Secretary of State to maintain a close interest in respect of all major questions of Indian finance, such as the budgetary

arrangements of the Central Government, the capital programme of that Government, the exchange and the currency. As the Secretary of State is responsible for meeting his obligations in this country, he has always recognised his responsibility for maintaining in this country adequate balances for the purpose.

6. In terms the Local Government (Borrowing) Rules (vide pp. 263–4 of Rules under the Government of India Act) imply that it is open to a provincial Government, acting under section 30 (1A) of the Government of India Act, itself to raise loans outside India (and therefore presumably in the United Kingdom) if the sanction of the Secretary of State in Council is first obtained. But as the Secretary of State in Council himself cannot raise loans outside India without Parliamentary sanction (as just explained), these rules are probably, by themselves, insufficient to enable a provincial Government to exercise this power. It will be observed that the rules in question give control over the borrowing in India by local Governments, but that this control is in form vested in the Government of India, and not in the Secretary of State.

7. The foregoing is a brief statement of the strict legal position as regards the Secretary of State's responsibilities for Indian finance, including currency and exchange, which can be still more briefly summarised by the statement that, subject to the approval of Parliament, on whose behalf he acts, his powers are unlimited, and that the Government of India are bound to carry out any instructions they may receive from him on the subject. But although the amending Act of 1919 made no concrete change in this respect in the relations between the Secretary of State and the Government of India and in their respective powers and duties, account has to be taken, in estimating the present character in practice of these relations, powers, and duties, of the general bearing of other provisions of the Government of India Act which were inserted in it by the Act of 1919, and of the policy underlying the latter Act.

The general aim of the Act of 1919, as set out in the Preamble, was "the gradual development by successive stages of self-governing institutions, with a view to the progressive realisation of responsible government in British India as an integral part of the Empire." One of the steps taken by the Act of 1919 towards the realisation of this object was the creation, in association with the Central Executive Government, of a bicameral Legislature containing in respect of its lower chamber an overwhelming, and in respect of its upper chamber a small, majority of non-official elected members, and endowed with all the ordinary powers and attributes of a legislative body, including power to vote and withhold supply. It is true that the Act contains provisions (sections 67 (2) and (2A), 67A (3), (7) and (8), and 67B), which enable the executive, notwithstanding an adverse vote, to make its decisions effective or which place limitations on the powers of the Legislature; it is also true that the Joint Select Committee in their Report on the Bill of 1919 expressed the following opinion in respect of these powers :—

> "It is not within the scope of the Bill to introduce at the present stage any measure of responsible government into the central administration, and a power must be reserved to the Governor-General in Council of treating as sanctioned any expenditure which the Assembly may have refused to vote, if he considers the expenditure to be necessary for the fulfilment of his responsibilities for the good government of the country. It should be understood from the beginning that this power of the Governor-General in Council is real, and that it is meant to be used if and when necessary."

At the same time it is obvious—and this the Joint Select Committee recognised in their important observations on clause 33 of the Bill (copy appended)—that the successful working of a transitional constitution such as that contained in the present Government of India Act cannot be looked for unless both parties to the contract are prepared to co-operate in a spirit of give and take, and that this involves on the part of the Government of India and of His Majesty's Government a constant endeavour to conform their policy, to the utmost extent which is compatible with their obligations and responsibilities for the welfare of the country, to Indian public opinion as constitutionally expressed in the Legislature. The Joint Select Committee, in their observations just referred to, endeavoured to secure these conditions by suggesting the adoption of a convention of non-interference by the Secretary of State in certain defined circumstances. The difficulty of reducing to rule of thumb the regulation of the relations between the Indian Legislature, the Government of India, and the Secretary of State, without at the same time impairing or destroying the legal responsibility which still exists on the part of Parliament for the good

government of India, will be apparent; but it may be said generally that since the passage of the Government of India Act in 1919 every endeavour has been made to bring the relations between the Secretary of State in Council on the one hand and the Government of India and the Central Legislature on the other into accord with the principles underlying the Joint Select Committee's recommendation. How far the Secretary of State and the Government of India would be prepared in any given case to surrender their judgment to that of the Indian Legislature in the event of difference of opinion must necessarily remain a question for decision on each case as it arises, with regard to its intrinsic importance, and to the nature and scope of its consequences to India itself, to the United Kingdom, to the Empire, and to foreign relations. And this is all that can be predicated in general terms of the attitude likely to be adopted by the Secretary of State towards proposals for changes in the policy regulating, and the methods of control over, Indian finance, currency and exchange, except to observe that certain changes in these matters might be of such a character as to alter materially, if adopted, the relationship between the Secretary of State and the Government of India, as defined in the Government of India Act.

EXTRACT FROM THE REPORT of the Joint Select Committee of the House of Lords and the House of Commons appointed to consider the Government of India Bill.

* * * * *

Clause 33.—The Committee have given most careful consideration to the relations of the Secretary of State with the Government of India, and through it with the provincial governments. In the relations of the Secretary of State with the Governor-General in Council the Committee are not of opinion that any statutory change can be made, so long as the Governor-General remains responsible to Parliament; but in practice the conventions which now govern these relations may wisely be modified to meet fresh circumstances caused by the creation of a Legislative Assembly with a large elected majority. In the exercise of his responsibility to Parliament, which he cannot delegate to anyone else, the Secretary of State may reasonably consider that only in exceptional circumstances should he be called upon to intervene in matters of purely Indian interest where the Government and the Legislature of India are in agreement.

This examination of the general proposition leads inevitably to the consideration of one special case of non-intervention. Nothing is more likely to endanger the good relations between India and Great Britain than a belief that India's fiscal policy is dictated from Whitehall in the interests of the trade of Great Britain. That such a belief exists at the moment there can be no doubt. That there ought to be no room for it in the future is equally clear. India's position in the Imperial Conference opened the door to negotiation between India and the rest of the Empire, but negotiation without power to legislate is likely to remain ineffective. A satisfactory solution of the question can only be guaranteed by the grant of liberty to the Government of India to devise those tariff arrangements which seem best fitted to India's needs as an integral portion of the British Empire. It cannot be guaranteed by statute without limiting the ultimate power of Parliament to control the administration of India, and without limiting the power of veto which rests in the Crown; and neither of these limitations finds a place in any of the Statutes in the British Empire. It can only therefore be assured by an acknowledgment of a convention. Whatever be the right fiscal policy for India, for the needs of her consumers as well as for her manufacturers, it is quite clear that she should have the same liberty to consider her interests as Great Britain, Australia, New Zealand, Canada and South Africa. In the opinion of the Committee, therefore, the Secretary of State should as far as possible avoid interference on this subject when the Government of India and its Legislature are in agreement, and they think that his intervention, when it does take place, should be limited to safeguarding the international obligations of the Empire or any fiscal arrangements within the Empire to which His Majesty's Government is a party.

The relations of the Secretary of State and of the Government of India with provincial governments should, in the Committee's judgment, be regulated by similar principles, so far as the reserved subjects are concerned. It follows, therefore, that in purely provincial matters, which are reserved, where the provincial government and legislature are in agreement, their view should ordinarily be allowed to prevail, though it is necessary to bear in mind the fact that some reserved subjects do cover matters in which the central government is closely concerned. Over transferred

subjects, on the other hand, the control of the Governor-General in Council, and thus of the Secretary of State, should be restricted in future within the narrowest possible limits, which will be defined by rules under sub-clause 3 of clause 1 of the Bill.

Rules under this clause will be subsidiary legislation of sufficient moment to justify their being brought especially to the notice of Parliament. The Secretary of State might conveniently discuss them with the Standing Committee whose creation has been recommended in this Report; and Parliament would no doubt consider the opinion of this body when the rules come, as it is proposed that they should do, for acceptance by positive resolution in both Houses. The same procedure is recommended by the Committee for adoption in the case of rules of special or novel importance under other clauses of the Bill. It must be for the Secretary of State to decide which of the many rules that will fall to be drafted by the Government of India can be sufficiently dealt with by the ordinary process of lying on the table of Parliament for a certain number of days. In deciding this point, however, he may naturally have recourse to the advice of the Standing Committee, should it happen to be in session, and obtain their assistance in determining which rules deserve to be made the subject of the more formal procedure by positive resolution.

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APPENDIX 69.

Memorandum No. 1, on "Indian Currency Developments since 1920," submitted by Mr. C. H. Kisch, C.B., Financial Secretary, India Office.

1. The main facts of the Indian currency system as it existed before the war, and the dislocation of the system arising out of the war are described in the Report of the Indian Exchange and Currency Committee, 1919 (the Babington-Smith Committee).* In order to bring the record up to date, it is proposed to review the main developments of Indian currency policy since the date when this Report was presented.

Report of Babington-Smith Committee.

2. The cardinal recommendations of the Babington-Smith Committee's Report were :—

(1) That the silver rupee, unchanged in weight and fineness, should remain unlimited legal tender and should have a fixed exchange value, expressed in terms of gold at the rate of one rupee for 11·30016 grains of fine gold, that is, one-tenth of the gold content of the sovereign.

(2) That the sovereign, which had been rated by the Indian Coinage Act, 1906, at Rs. 15, should be a legal tender in India at the ratio of Rs. 10 to one sovereign.

The principle of these recommendations was accepted by the Secretary of State in Council, and, as a first step to giving effect to them, a notice was issued on 2nd February 1920 by the Government of India, notifying the fixation of the acquisition rate for gold imported into India, which had previously been subject to variation from time to time (*vide* para. 26 of Report), at Rs. 10 for each sovereign tendered for import, or one rupee for 11·30016 grains of fine gold. The text of this notification and the announcement on general policy issued by the Secretary of State are attached to this memorandum (Appendix I).

Rise in exchange on issue of Report.

Prior to the issue of this announcement, the official rate of exchange, *i.e.*, the rate at which the Secretary of State was prepared to sell Immediate Telegraphic Transfers on India, was 2*s*. 4*d*., but, with the announcement of the adoption of the main recommendation of the Currency Committee, exchange rose on 2nd February to 2*s*. 8½*d*., which was about 1*d*. below the theoretical parity of the 2*s*. gold rupee as measured by the London–New York exchange.

Economic conditions, 1919–20: end of post-war boom.

3. Economic conditions in 1919 were influenced by the unusual circumstances arising out of the termination of the war. World prices ruled high and India was able to obtain good value for her exports, which were in keen demand. The sharp

* References in this Memorandum and in Memorandum No. 2 to the "Report" should, unless otherwise stated, be taken as referring to the Report of the Babington-Smith Committee. By the Report is meant the Report of the majority of the Committee, which comprised all the members except Mr. (now Sir D.) Dalal.

advance of exchange had not apparently prejudiced Indian trade, and the year 1919–20 recorded a favourable balance in respect of India's private trade in merchandise of Rs. 122 crores—a record figure at the time (*see* statistics in Appendix II).

Conditions changed entirely in the course of 1920, when it began to be realised that the boom in the previous year was based on unsubstantial foundations and measures were taken to arrest inflation. In November 1919 the Bank of England discount rate was raised to 6 per cent., and in April 1920 to 7 per cent., and about the same time the United States authorities brought the creation of credit within stricter control. The rise in prices was stayed and the slump, which reached such serious proportions later, began.

Reversal of normal Indian trade current.

India soon felt the change in economic conditions. The value of her exports declined from Rs. 330 crores in 1919–20 to Rs. 258 crores in 1920–21. The stream of imports, on the contrary, increased in the same period from Rs. 208 crores to Rs. 336 crores (*see* figures in Appendix II). This last tendency was to be expected, as during the war India had been starved of her normal imports of manufactured goods, and the high exchange had acted as an incentive to the giving of large orders which were now in process of execution. These influences placed a heavy strain on the Indian exchange, which official policy was directed to maintaining at 2*s.* (gold). The difficulties were increased by the trend which the sterling-dollar exchange was now taking. When the Babington-Smith Committee's Report was signed on 22nd December 1919, the London-New York exchange, which had been "unpegged" in March 1919, stood at \$3.80 per £, on which basis the sterling equivalent of the 2*s.* gold rupee was 2*s.* 6$\frac{3}{4}$*d.* By 2nd February 1920, when effect was given to the main proposal of the Committee, the London-New York rate had dropped to \$3.47$\frac{1}{2}$ per £ and two days later to \$3.25, resulting in the theoretical parity of the rupee being almost 3*s.*

4. The great prosperity which Indian trade had enjoyed during the war period had led to the accumulation of large profits which were waiting in India for a suitable opportunity for remittance to the United Kingdom. The decision of the Government regarding the future level of exchange had thus been awaited with much eagerness, and the announcement of Government's decision, associated, as it turned out to be, with a weak sterling-dollar exchange and a correspondingly high sterling parity of the rupee, was the signal for a vigorous demand for homeward remittance. There had been a certain demand for Reverse Councils (that is, drafts on London) in January 1920, when the official rate of exchange was 2*s.* 4*d.*, on the basis of which rate drafts on London were sold by the Government of India to the amount of 5,394,000*l.* The demand, however, became far more intense after the announcement of the new exchange policy. Government was in possession of large supplies of sterling, which it was prepared to use with the object of making the new exchange policy effective, and reverse drafts were sold weekly in India from 5th February 1920 to 28th September 1920, up to a total amount approximately of 50,000,000*l.* But during this period the supply of exchange offered was not equal to the demand and the market rate for the rupee gradually fell away. During the earlier period when reverse drafts were being sold, the price was based on the theoretic 2*s.* gold parity for the rupee as measured by the sterling-dollar exchange, a basis that involved offers at a rate substantially in excess of 2*s.* sterling. For a considerable period the rate so fixed was higher than the current market rate, but later the attempt to hold the rate at 2*s.* gold was abandoned, and from 24th June 1920 the price of reverse drafts was based on 2*s.* sterling (*see* para. 2 of official announcement, Appendix III). In September 1920 it was decided to suspend efforts to maintain the exchange value of the rupee by the sale of drafts on London (*see* Appendix IV), and from that time to the present date the sterling resources of Government have not been further drawn upon with this object.

Break in rupee exchange.

The decision of September 1920 signified the failure of Government to contract Indian currency to the extent required to maintain the exchange. This contraction to have been completely successful would have involved the reduction of the Indian price level in conformity with the fall in world prices. The requisite adjustment had now to be effected by the decline in the exchange value of the rupee. It is due to the Babington-Smith Committee to point out that the possibility of developments which might lead to the breakdown of the 2*s.* gold rupee was not unforeseen by them. In para. 51 of their Report the Committee, after expressing the view that a high exchange was not likely to inflict any permanent injury on Indian trade, noted that if contrary to their expectation a great and rapid fall in world prices were to

take place, a new element of disturbance would be introduced, and that circumstances might arise which would endanger the maintenance of exchange at the level proposed. In that event the Committee recognised that it would be necessary to consider the whole problem afresh. The fall in prices in 1920, which occurred so soon after the issue of the Committee's Report, was the main cause for the failure of their scheme for the Indian currency.

Removal of control over private trade in precious metals.

5. It will be convenient at this stage to refer to certain other developments of interest that took place in 1920. War conditions had led to a stringent control over the import and export of silver and gold to and from India, and one of the principal objects to be attained by the fixation of the rupee in terms of gold was to liberate the precious metals from official control. Restrictions on the private import of silver were withdrawn on 2nd February 1920, when the new exchange policy was announced. As regards export restrictions, the sale of Reverse Councils, coupled with the change in Indian economic conditions, led to a return of rupees to Government, whose holding of silver coin rose from Rs. 29⅝ crores on 1st January 1920 to Rs. 37 crores on 1st June 1920. Within the same period the metallic proportion of the currency note reserve rose from 45½ per cent. to 51 per cent. The convertibility of the note was thus again secure, and the decline of tension in the silver market, which was so pronounced a feature of the post-war boom, was shown by a fall in the New York price from 134½ cents per ounce in February 1920 to 91 cents per ounce on 30th June 1920. Circumstances were thus favourable to the cancellation of the prohibition of private exports of silver, which was withdrawn on 3rd July 1920.

The removal of the control over gold presented certain special difficulties. India had always been a large consumer of gold, and the practical cessation of imports during the war had led to the existence of a large premium on gold in India. On 31st January 1920, immediately before the decisions on the Babington-Smith Committee's Report were announced, the price of gold in India stood at Rs. 27. 6 as. per tola or Rs. 17. 3 as. per sovereign. The legal rating of the sovereign still stood at Rs. 15, but owing to the premium gold did not circulate as currency. The objective of Government was gradually to reduce the premium on gold in India by sales of bullion in the bazaar until the price of gold in India had been brought into conformity with the world price, and then to remove the embargo on import.

The programme of gold sales lasted from September 1919 to September 1920, by which time gold equivalent to nearly £38¾ millions sovereigns was sold. When the sales were completed the price of the sovereign in India was just under Rs. 15, which represented the cost of importing a sovereign from this country. Actually it had been found possible to withdraw the restrictions on the private import of gold bullion in the course of June 1920, and the later sales were conducted with the object of ensuring that any outstanding demand should be satisfied without undue strain on the world market. Conditions did not, however, enable the Government of India to issue sovereigns in exchange for rupees. Sovereigns could clearly not be paid out by Government in exchange for Rs. 15, the then statutory ratio, seeing that this was about to be reduced to Rs. 10, which was already the formal acquisition rate. When, as explained below, the statutory rate was actually reduced to Rs. 10, issues by Government at this ratio could not be made as the market value of the sovereign was much in excess of the statutory rate. As regards the export of gold from the bazaar, this (*vide* para. 65 of the Babington-Smith Committee's Report) was not prohibited during the war,* but the restrictions on the melting of current gold coin were removed in February 1920.†

* The issue of gold by Government for the encashment of notes was suspended in August 1914 (*vide* para. 10 of Report).

Indian Coinage (Amendment) Act, 1920.
Indian Paper Currency (Amendment) Act 1920.

6. Of other positive measures taken in 1920, the passage of the Indian Coinage Amendment Act in September requires special notice. This Act, together with the corresponding amendment of the Paper Currency Act, gave formal effect to the change of ratio recommended by the Babington-Smith Committee. The sovereign became legal tender in India at Rs. 10, suitable arrangements having been made some weeks previously for the protection of Indian holders of coined gold who might otherwise have suffered by the change of rating.

The Paper Currency Act provided as a temporary arrangement for an increase in the security portion of the reserve by the creation of *ad hoc* Indian Government securities to compensate for the decline in the rupee valuation of the gold and sterling assets, entailed by the change of ratio. The Act contemplated the gradual

† *See* Appendix I, No. 2, para. 5.

reduction of the holding of the Government of India securities* to Rs. 20 crores, of which the created securities were not to exceed Rs. 12 crores. The profits on the Paper Currency were to be devoted to this purpose, and to accelerate the reduction of the *ad hoc* securities it was further arranged that the excess in the Gold Standard Reserve over 40,000,000*l*. should be utilised each year with the same object.† The Paper Currency Act, in addition to laying down special provisions to govern the period in which the holding of the Government of India's securities was being reduced to normal proportions, laid down permanent provisions for the constitution of the Paper Currency Reserve which were to be brought into effect on a day to be "appointed." Owing, however, to the breakdown of the 2*s*., gold, rupee this day has not arrived and the Act will require revision to meet altered circumstances, when a new ratio for the rupee is established.

Exchange policy since 1920.

7. While active measures to support exchange up to the new statutory level by the sale of reverse drafts were suspended in September 1920 no formal abandonment of that objective took place. As time advanced it came to be realised with increasing clearness that the 2*s*. gold rate, which might have been appropriate had world prices remained on the level of 1919, was likely to be unsuitable in the circumstances that arose after the general and heavy fall of prices that began in 1920. Though the economic tendencies that were operative during these years shattered the scheme of the Babington-Smith Committee, Government felt it incumbent upon itself to take such indirect measures as might tend towards checking the fall in exchange and as might create conditions favourable to its gradual recovery. The character of the measures taken, some of which would clearly have had to be taken in any event altogether apart from exchange considerations, may be briefly considered.

Rehabilitation of Government finances.

8. The increase in the cost of administration in India, the Afghan War in 1919, and the breakdown of exchange produced heavy deficits in the budgets of the Government of India. For the five years ending 1922–23 the deficiency in the final accounts amounted to nearly Rs. 100 crores, as shown in the margin. These budget deficits entailed heavy borrowings in India and in London, a large increase of the floating debt, and a certain amount of currency inflation. It was the object of Government to get rid of the deficit as soon as possible, to reduce the floating debt, and to contract the inflated currency.

	Rs. lakhs.
1918–19 - -	5,73
1919–20 - -	23,65
1920–21 - -	26,01
1921–22 - -	27,65
1922–23 - -	15,02
Total -	98,06

By the exercise of stringent economy and the increase of taxation, combined with the effects of good monsoons and improving trade, budget equilibrium was restored in 1923–24, and has since been maintained. The issues of short-term Indian Treasury Bills to the public, which reached their maximum of Rs. 60¾ crores in May 1921, were entirely redeemed by July 1924.

Currency restriction.

9. As regards currency contraction, the tendency of Indian trade is to require in ordinary times substantial additions to the currency, and from the figures in Appendix V it will be seen that in the five years preceding the war the average annual absorption of currency was Rs. 22¾ crores. During the war and till the conclusion of the post-armistice boom, the increase was much greater; and for the five years ending 1919–20, excluding absorption of sovereigns, which cannot have circulated to any material extent as currency, the average annual absorption of currency was Rs. 49½ crores. The existence of budget deficits of a substantial amount clearly made currency contraction a matter of unusual difficulty, but in the three years 1920–21, 1921–22 and 1922–23 Government was able to effect a reduction in the currency circulation amounting to Rs. 38¼ crores.

The measures that were taken to contract the currency made themselves felt in the Indian money market, especially during the busy season of 1923–24. This was a season of active trade following a good monsoon, and the demand for money was

* The Act prescribed Rs. 85 crores as the maximum for all permissible securities held in the Reserve, whether Government of India securities or otherwise, apart from the bills of exchange referred to in the footnote on page 4. By the Indian Paper Currency (Amendment) Act, 1925, the maximum fiduciary issue has been raised to Rs. 100 crores. *See* para. 11 below.

† As regards the profits on the Paper Currency investments, the Act was subsequently amended to enable these profits to be credited to revenue, and they have actually not been used in any year for the cancellation of the *ad hoc* securities in the Reserve. The excess over 40,000,000*l*. in the Gold Standard Reserve was so used in 1921–22 and 1922–23, after which date the interest on the investments in the Reserve has been credited to revenue.

keen. Provisions existed in the Indian Paper Currency Act, as amended in 1923,* for interest-bearing advances to the Imperial Bank by Government up to Rs. 12 crores, and though full advantage was taken of these provisions a serious situation might have resulted had the Government of India not assisted the market by expanding the note issue to the extent of a further Rs. 12 crores against British Treasury bills earmarked to the reserve in London. Even so the Imperial Bank deemed it necessary to advance their rate of discount to 9 per cent. from February to April 1924, a rate which had not been reached since the amalgamation of the three Presidency Banks in 1921. From the figures in Appendix VII, which show the position of the note issue from February 1920 to the present date, it will be observed that the Government securities in the reserve rose in the busy season of 1923–24 by Rs. 14 crores (of which Rs. 2 crores represented an exchange of sterling Treasury bills against gold), but the maximum amount of securities, viz., Rs. 71·5 crores, was substantially lower than the then legal limit of Rs. 85 crores. The object of restricting the increase was to avoid any risk of renewed inflation which might militate against the recovery of exchange, which was still below 1*s*. 4*d*. gold.

Remittance.

10. Apart from the above measures, which must have contributed to check the weakening of exchange and to promote its recovery after the collapse in 1920, Government endeavoured, so far as it could, to avoid placing any positive strain on exchange in connection with the supply of funds for meeting the Home charges. These charges, which amount to about 28,000,000*l*. (exclusive of capital charges) per year, were in the past mainly met by the sale of Council drafts† to banks and other institutions which required rupees for the purpose of financing Indian trade. The sale of these drafts to the public was entirely suspended from January 1920, and it was not until January 1923, when the rupee exchange had recovered to 1*s*. 4*d*. sterling, that Government again offered Council drafts for sale. During the period of suspension the requirements of the Home Treasury were met mainly from the proceeds of recoveries from the Imperial Government in respect of expenditure incurred by the Government of India on their behalf and by sterling loans‡ of unprecedented amount.

The date of the resumption of the sale of Council drafts is significant, as 1922–23 marked the return of Indian trade towards more normal conditions. The extreme reaction from the boom conditions of 1919–20 largely spent itself, so far as India was concerned, in the years 1920–21 and 1921–22, when there were heavy adverse balances of trade. In 1922–23 the figures of the balance of private trade in merchandise and treasure showed a credit of nearly Rs. 30 crores in India's favour. (See Appendix II.) This tendency has been confirmed in the two succeeding years. The Government have thus been able to effect extensive remittances from India to London for the purpose of meeting the Home charges, and it has not been found necessary to float any loan in the United Kingdom since May 1923, all Home charges, both on revenue and capital account, having been defrayed from funds drawn from India with the addition of certain small receipts that accrue on this side.

Season 1924–25.

11. The monsoon of 1924 was a satisfactory one, and when the busy season opened that year there was considerable expectation that the experience of 1923–24 would be repeated, and that high money rates would in due course rule in the Indian market. This view derived support from the cash ratio of the Imperial Bank, whose discount rate rose to 6 per cent. on 16th October 1924, some six weeks before the corresponding event occurred in the preceding year. To mitigate the adverse effects on trade that might ensue from the persistence of unduly high money rates for an excessive period, the Secretary of State and the Government of India agreed on a policy of replenishing with fresh issues of currency the cash balance of the Imperial Bank, with a view to preventing it falling below a reasonable figure. The standard tentatively adopted for this purpose was that the Bank's cash resources should not be allowed to fall materially below Rs. 15 crores before March 1925 or below Rs. 12 crores

* The Babington-Smith Committee recommended that, to meet the seasonal demand for currency in India, powers should be taken which would enable notes to be issued against commercial bills up to a limit of Rs. 5 crores. This additional currency was to be issuable in the form of loans to the Imperial Bank on the collateral security of the bills and was to carry interest at 8 per cent. In 1923 the limit was raised from Rs. 5 to Rs. 12 crores, and certain changes have been made as regards the rate of interest to be charged. At present Rs. 4 crores may be issued at 6 per cent. and Rs. 8 crores at 7 per cent., subject to the whole outstanding advance carrying interest at the minimum of bank rate.

† This method has now been supplemented, and, for the time being, has been largely superseded by the purchase of sterling in India by the Government of India.

‡ Sterling loans have been issued in London by the Secretary of State as follows: 17,500,000*l*. in 1921–22; 32,500,000*l*. in 1922–23; and 20,000,000*l*. in 1923–24. No sterling loan has been issued since May 1923.

in the later part of the busy season. As regards active exchange operations, the policy of the previous busy season was followed, namely, that advantage should be taken of a firm or rising exchange to effect the remittances required for the immediate and prospective needs of the Home Treasury, sterling exchange being bought on an abundant scale with a view to checking any unduly rapid appreciation of the rupee, and operations being avoided when the market was weak.

During September 1924 exchange rose from about 1*s.* $5\frac{1}{4}$*d.* to about 1*s.* $5\frac{3}{4}$*d.*, and early in October 1*s.* $6\frac{5}{16}$*d.*, then equivalent to about 1*s.* $4\frac{3}{4}$*d.* gold, was touched, despite heavy remittance operations by Government.

The position indicated by this sharp upward movement in the exchange formed the subject of anxious consideration between the Government of India and the Secretary of State, as the result of which it was decided that, without making any public announcement of policy, efforts should be made to prevent exchange from breaking away materially above 1*s.* 6*d.* for the time being, any tendency of exchange to rise appreciably above this figure being counteracted by free offerings of rupees. In pursuance of this policy, remittances from India to the Home Treasury were effected in the latter half of 1924–25 by the purchase of sterling in India and the sale of Council drafts in London to the amount of 21,864,536*l.* at rates varying between 1*s.* $5\frac{13}{16}$*d.* and 1*s.* $6\frac{5}{16}$*d.*, the last remittance in the financial year being made on 10th March 1925, after which date exchange declined for a period somewhat below 1*s.* 6*d.*

During the same period the note issue was expanded to the extent of Rs. 8 crores against internal bills of exchange and Rs. 6 crores against British Treasury bills. In order to remove anxiety, and to provide ample margin for possible expansion, the maximum limit of the fiduciary issue was raised by the Indian Paper Currency (Amendment) Act, 1925, from Rs. 85 to Rs. 100 crores, but it has not been found necessary to have recourse yet to these additional powers.*

The demand for money was not as keen during the busy season of 1924–25 as in the preceding year, and the Imperial Bank did not raise their rate of discount above 7 per cent., as compared with 9 per cent. the year before. The comparative ease with which the monetary needs of the season were met is in part to be explained by the fact that, owing to the large net imports of bullion (especially gold, of which nearly Rs. 50 crores were imported in the half-year ending March 1925), the visible balance of trade in favour of India was substantially lower in 1924–25 than in 1923–24. Further, as explained above, the policy of the Imperial Bank was no doubt influenced by the knowledge that the Government of India were anxious to avoid a recurrence of the extreme stringency of the previous year, and were prepared to co-operate with them to this end.

1925–26. As regards 1925–26 (to date) there has been no material departure from the policy adopted in 1924–25 as regards the exchange. After consideration of all the relevant conditions, the Secretary of State and the Government of India agreed that it was undesirable that exchange should be permitted, for the time being at any rate, to rise materially above 1*s.* 6*d.* From April to September 1925 remittances have been effected by Government to the amount of 20,548,000*l.* at rates varying from 1*s.* 6*d.* to 1*s.* $6\frac{3}{16}$*d.* for telegraphic transfers. During this period the balance of private trade in commodities and treasure has continued strongly in India's favour, the figures for April—August (see Appendix II) showing a credit of nearly Rs. 49 crores.

Prices and exchange. 12. The reflection of the collapse of trade in 1920 and the subsequent gradual improvement on the course of Indian internal prices and the rupee exchange may now be considered.

The following table exhibits the movements in the Indian wholesale price level since the pre-war period, in comparison with the corresponding changes in the wholesale price levels of the United Kingdom and United States of America. The table also shows, in the penultimate column, the average sterling-rupee exchange in recent years, and as, after the unpegging of the London-New York exchange in 1919, sterling depreciated substantially in terms of gold, figures are given in the final column showing the gold equivalent of the rupee after allowance is made for the discount on sterling.

* This increase in the permissible fiduciary issue was coupled with a proviso that the value of the created securities in the Reserve should not exceed Rs. 50 crores.

	Index numbers of wholesale prices.			Exchange.			
	Calcutta.*	U.K. "Statist."	U.S.A. Labor Bureau.	Average rupee-sterling exchange.†		Gold value of the rupee (based on Calcutta-on-London and London-on-New York T.T. selling rates).	
				s.	d.	s.	d.
1913 average - -	—	100	100	1	$4\frac{1}{16}$	—	
1914 " - -	100	100	98	1	$4\frac{1}{16}$	—	
1915 " - -	112	127	101	1	4	—	
1916 " - -	128	160	127	1	$4\frac{1}{8}$	—	
1917 " - -	147	206	177	1	$4\frac{3}{8}$	—	
1918 " - -	180	226	194	1	$5\frac{1}{2}$	—	
1919 " - -	198	242	206	1	$8\frac{15}{16}$	1	$7\frac{1}{16}$
1920 " - -	204	295	226	2	$0\frac{3}{32}$	1	$5\frac{25}{32}$
1921 " - -	181	182	147	1	$4\frac{1}{32}$	1	$0\frac{11}{16}$
1922 " - -	180	154	149	1	$3\frac{19}{32}$	1	$2\frac{3}{16}$
1923 " - -	176	152	154	1	$4\frac{9}{32}$	1	$3\frac{5}{16}$
1924 " - -	177	164	150	1	$5\frac{1}{4}$	1	$3\frac{21}{32}$
1925—Jan. - -	171	170	160	1	$5\frac{15}{16}$	1	$5\frac{5}{8}$
Feb. - -	172	168	161	1	$5\frac{31}{32}$	1	$5\frac{5}{8}$
Mar. - -	168	165	161	1	$5\frac{15}{16}$	1	$5\frac{19}{32}$
April - -	169	162	156	1	$5\frac{27}{32}$	1	$5\frac{19}{32}$
May - -	164	160	155	1	$5\frac{15}{16}$	Discontinued on reversion of U.K. to gold standard.	
June - -	157	154	157	1	$6\frac{1}{32}$		
July - -	160	158	160	1	$6\frac{3}{32}$		
August - -	157	158	160	1	$6\frac{3}{32}$		

* This index is based on the prices in July 1914 (100), and is constructed by obtaining the arithmetic average of the ratios of the individual prices of 16 groups of 45 articles. The index is not weighted except in a crude way by allowing two or more quotations for certain important commodities, 73 quotations being taken in all.

† The rates for the years 1913 to 1918 represent the average rates of exchange obtained by the Secretary of State for sales of Bills and Telegraphic Transfers on India; from 1919 onwards the rates represent the daily average for each year of the market Telegraphic Transfer selling rates in Calcutta on London.

In para. 49 of their Report the Babington-Smith Committee referred to the effect of the rise in the rupee exchange on the Indian price-level, and observed that, though it was impossible to estimate in precise terms the influence of the rise in exchange on Indian prices, they did not doubt that "in accordance with accepted economic theory Indian prices would, but for the rise in exchange, have been still further enhanced."

It will be noted from the above table that in 1920 the average of the United Kingdom price-level was practically 200 per cent. above the pre-war figure. During the same period the level of Indian prices had risen by only 100 per cent. Without postulating any precise equilibrium in the movement of British and Indian prices, it may be assumed that the difference between the above figures was, as suggested by the Babington-Smith Committee, to a substantial extent accounted for by the rise in the rupee-sterling exchange, of which the average in 1920 was 2*s*. as compared with 1*s*. 4*d*. before the war.

From 1920 to 1921 gold prices as measured by the United States index declined by 35 per cent., and sterling prices according to the *Statist* index by 38 per cent., or, if this movement is considered from another angle, gold recovered 43 per cent. and sterling 32 per cent. of the loss in purchasing power suffered since the outbreak of war. Economic events moved somewhat differently in India. From 1920 to 1921 the Indian price-level fell only about 11 per cent., that is, the rupee failed to retain the full relative advantage in respect of purchasing power which it had established with reference to gold and sterling during the great rise in world-prices that occurred towards the close of the war and in the post-armistice period.

The circumstances that led to the breakdown of the policy aiming at a stabilisation of the rupee at 2*s*. gold have been discussed in paragraphs 3 and 4. At this stage it seems sufficient to observe that the contraction of currency, which would have

been required to induce a movement in the Indian price-level conforming to that occurring in gold and sterling prices, would have been a hazardous undertaking, which might have brought untoward consequences to the Government of India and to Indian trade. The fact, however, that the Indian price-level did not conform to the movement in gold and sterling prices was naturally reflected in the decline of the rupee exchange.

After 1921 gold prices, it will be observed from the figures in Appendix VI relating to price movements in the United States of America, rose slightly in 1922 and 1923 taken as a whole. During this period until the middle of 1923 sterling prices were inclined to fall, but the difference in tendency is largely accounted for by the fact that the sterling value of gold was improving during this period, the averages for the dollar-sterling exchange in the years 1920, 1921, 1922, and 1923, being \$3.66, \$3.85, \$4.43 and \$4.57 respectively. In 1924 sterling prices rose again, and there was a slight reaction from the previous rise in the United States index. It will be observed from the monthly figures and diagram in Appendix VI that after the decline in Indian prices in 1921 the movement in the Indian price-level in the years 1922–24 was slight, and there was greater price stability in India than either in the United States of America or the United Kingdom. Here, again, the explanation may be found to some extent, at any rate, in the movement of the Indian exchange. The average rates for the rupee-sterling exchange in the four years 1921, 1922, 1923 and 1924 were 1*s.* $4\frac{1}{32}$*d.*, 1*s.* $3\frac{19}{32}$*d.*, 1*s.* $4\frac{9}{32}$*d.* and 1*s.* $5\frac{1}{4}$*d.*, respectively, the corresponding gold values for the rupee in these years being about 1*s.* $0\frac{3}{4}$*d.*, 1*s.* $2\frac{1}{8}$*d.*, 1*s.* $3\frac{1}{4}$*d.*, and 1*s.* $3\frac{21}{32}$*d.* At the end of April 1924—that is, at the close of the busy season—the sterling-rupee exchange stood at 1*s.* $4\frac{23}{32}$*d.*, equivalent to 1*s.* $3\frac{1}{16}$*d.* gold. Various influences, such as the gradual improvement of trade and the restriction of currency, to which reference has already been made, undoubtedly contributed to the progressive improvement in the exchange value of the rupee, but it is worth noting that this result was the natural concomitant of the relative stabilisation of the Indian price-level during a period in which gold and sterling prices had shown a tendency to rise. During 1925 the sterling and rupee indices show a declining trend without any marked disproportion in the movement for the first eight months of the year. During this period the rupee exchange has continued firm with a rising tendency.

While it is not suggested that any positive inferences can be drawn from the index numbers referred to in this note, the figures are of interest as conforming, when considered in their broad aspect, to the view that movements in the rupee exchange have a more or less definite relation to movements in world-prices. The collapse in world-prices in 1920 contributed to the heavy fall in the rupee exchange, and the subsequent partial recovery in world-prices has been a substantial factor in promoting the rise in exchange from the low level of 1921.

The bearing of the relation between prices and exchange on the question of the rating of the rupee will be further considered in a subsequent paper.

APPENDIX I.

Announcements issued in connection with the Report of the Committee on Indian Exchange and Currency, 1919.

No. 1.

ANNOUNCEMENT BY THE SECRETARY OF STATE FOR INDIA, PUBLISHED ON 2ND FEBRUARY 1920.*

The Secretary of State in Council has considered, in consultation with the Government of India, the Majority and Minority Reports received from the Committee appointed by him, under the chairmanship of Sir Henry Babington-Smith, to advise on the subject of Indian Exchange and Currency. The Majority Report, which is signed by the Chairman and all the members of the Committee except Mr. D. M. Dalal, states as its objects the restoration of a stable and automatic system and the maintenance of the convertibility of the note issue.

* This announcement was also issued in India on 2nd February 1920 as Finance Department Notification No. 369 F.

The fundamental recommendations of the Report are as follows :—

(a) that the present rupee, unchanged in weight and fineness, should remain unlimited legal tender;

(b) that the rupee should have a fixed exchange value, and that this exchange value should be expressed in terms of gold at the rate of one rupee for 11·30016 grains of fine gold, that is, one-tenth of the gold content of the sovereign;

(c) that the sovereign, which is now rated by law at Rs. 15, should be made a legal tender in India at the revised ratio of Rs. 10 to one sovereign;

(d) that the import and export of gold to and from India should be free from Government control, as soon as the change in the statutory ratio has been effected, and that the gold mint at Bombay should be open for the coinage into sovereigns of gold tendered by the public;

(e) that the notification of the Government undertaking to give rupees for sovereigns should be withdrawn;

(f) that the prohibition on the private import and export of silver should be removed in due course, and that the import duty on silver should be repealed unless the fiscal position demands its retention.

These recommendations develop, with the necessary modifications required by altered circumstances, the principles on which the Indian currency system was established before the war, and are accepted by the Secretary of State in Council as expressing the goal towards which Indian currency policy should now be directed.

Under the conditions existing prior to the war sterling and gold were identical standards. The existing disparity has made a choice between these standards necessary, and the Committee's recommendation is in favour of placing the rupee on a gold basis.

In recommending a rate, namely, that above mentioned, for the exchange value of the rupee, the Chairman and majority have taken account of the high range of silver prices, and of the importance of safeguarding the convertibility of the Indian note issue by providing so far as possible that the token character of the rupee shall be restored and maintained, *i.e.*, that the Indian Government may be in a position to buy silver for coinage into rupees without loss. They were also impressed by the serious economic and political risks attendant on a further expansion of Indian prices such as must be anticipated from the adoption of a low rate.

The arguments advanced in favour of a gold basis and a high rate of exchange appear to the Secretary of State in Council to be conclusive, and he has decided to take the necessary steps to give immediate effect to the recommendations on these points. Accordingly the Government of India have to-day announced that the rate which they will pay for gold tendered to them under the Gold Import Act by private importers will henceforth be fixed at one rupee for 11·30016 grains of fine gold, that is 10 rupees for the gold content of the sovereign. The consequential changes in the regulations relating to the sale of Council Drafts by the Secretary of State in Council and Reverse Councils by the Government of India will be notified separately.

The question of the internal ratio presents special difficulties. The Committee recommend the maintenance of gold on a legal tender footing, especially in view of possible difficulties in obtaining adequate supplies of silver. A fixed ratio must therefore be established between the rupee and gold as used in the internal circulation, either one sovereign for Rs. 15 as at present or one sovereign for Rs. 10 in correspondence with the new exchange ratio. The former alternative would give the sovereign the status of an overvalued token coin, necessitate permanent control over the import of sovereigns and make an open gold mint impossible. The Secretary of State in Council agrees with the Committee that such conditions ought not to be contemplated as a permanent arrangement. On the other hand, the lower ratio cannot be effectively introduced while a great disparity continues to exist between the commercial price of gold in India and the intended Indian Mint par of one sovereign for Rs. 10.

Present conditions are the product of the war, and in some sense artificial. They cannot be immediately remedied without the risk of shock to the economic and monetary system in India and of reactions elsewhere to which India cannot in her own interests be indifferent; a gradual process of rectification and adjustment

to new conditions is required. For some time past action has been taken in India to reduce the premium on gold by regular Government sales of bullion to the public, and this measure will be further developed. It may be expected that in this way a natural adjustment may be effected and the path to legislation cleared.

The Secretary of State has decided therefore, (1) that the import of gold shall continue, for the present, to be controlled by licence under the Gold Import Act with a fixed acquisition rate as mentioned above, (2) that meanwhile periodical sales of gold bullion to the public shall continue, and (3) that as a provisional measure during the transitional period the sovereign shall remain a legal tender at the present ratio of Rs. 15.

In arriving at these decisions the Secretary of State in Council has not failed to give careful consideration to the Minority Report signed by Mr. D. M. Dalal. Mr. Dalal's main object is the effective restoration and maintenance of the ratio of Rs. 15 to one sovereign as a measure both of the exchange and the circulating value of the rupee. In order to secure this he relies upon freedom for the melting and export of rupees and corresponding freedom for the import of gold. To meet the possible resulting shortage of silver coin he recommends that as long as the New York price of silver remains above 92 cents Government should coin 2-rupee silver coins of reduced fineness, the coinage of rupees of present weight and fineness being meanwhile suspended and only resumed when the price of silver falls to the figure named. He also recommends that sterling drafts on the Secretary of State should be sold only at 1*s.* $3\frac{2}{3}\frac{9}{2}$*d.*

The Secretary of State in Council is satisfied that this programme could not be adopted without untoward consequences. The heavy exports of silver coin to be anticipated under the scheme must threaten not only the whole silver circulation but also the Government's reserve of silver coin, and entail the gravest risk of inconvertibility of the Government's note issue. The demand for the gold required *pari passu* to make this deficiency good must greatly aggravate any strain there may be on the gold stocks of the world when freedom of import is restored. Nor is it safe to assume that these difficulties could be met by issuing new silver coins of inferior fineness; the evidence against the acceptability of inferior substitutes for the present rupee has impressed the majority, and their recommendation on this head is accepted by the Secretary of State as decisive. Mr. Dalal's recommendation in regard to the rate for sterling drafts, if adopted, must produce an immediate crash in exchange, bringing unmerited disaster to those who have reasonably relied on some continuity of policy. The only cover which his scheme affords is the export of the country's circulating currency. In any case, even if a return to the pre-war level of exchange could be accomplished without shock to trade or risk to the currency system, it would lay India open to a further serious inflation of prices, while the Majority's recommendations would tend towards a reduction of the general price level in India.

Both during and since the war Indian currency and exchange have presented problems previously unanticipated and more perplexing than any encountered since the decision to close the Mints in 1893. But the Secretary of State in Council is satisfied that the decisions reached promise an eventual solution, and he desires to express his acknowledgments to the Committee and their Chairman for the ability and thoroughness with which they have explored the issues and framed their recommendations.

No. 2.

ANNOUNCEMENT DATED 2ND FEBRUARY 1920 ISSUED BY THE GOVERNMENT OF INDIA.*

The acquisition rate for gold imported under licence into India, which has hitherto been subject to variation notified from time to time, has now, in accordance with the Secretary of State for India's separate announcement published to-day relating to the recommendations of the Indian Currency Committee, been fixed, and the following fixed rates will apply to transactions on and after Monday, 2nd February, namely, Rs. 10 for each sovereign tendered for import, or one rupee for 11·30016 grains of fine gold.

* The first two paragraphs of the above Announcement were also issued in London on 2nd Feb. 1920.

2. Council drafts will continue to be offered at the Secretary of State's discretion for weekly sale at the Bank of England by competitive tender. The rate for deferred telegraphic transfers and bills will, until further notice, rank for allotment with tenders at $\frac{1}{16}$th of a penny higher for immediate telegraphic transfers. No announcement will be made of the minimum rate at which tenders will be accepted, and the Secretary of State for India in Council reserves the right of rejecting the whole or part of any tender. In accordance with the Committee's recommendations, the Government of India will, when occasion requires, offer for sale stated weekly amounts of sterling reverse drafts on the Secretary of State for India (including immediate telegraphic transfers).

The rates for immediate telegraphic transfers on London will be announced on each occasion by the Controller of Currency, and will be based on the sterling equivalent of the price of 11·30016 grains fine gold, as measured by the prevailing sterling-dollar exchange, less a deduction representing the charges of remitting gold. The rate for deferred drafts on London will, until further notice, be $\frac{1}{16}$th of a penny higher than the immediate rate as at present.

3. The Finance Department Notification No. 4071,* dated the 11th September 1897, providing for the issue of rupees at the reserve treasuries in Calcutta, Madras, and Bombay, in exchange for sovereigns and half-sovereigns at the rate of Rs. 15 and Rs. 7½ respectively, is cancelled. Notification No. 6908A,* dated the 11th December 1906, regarding the receipt of sovereigns and half-sovereigns at the mints, is also cancelled.

4. The existing prohibition on the import of silver is cancelled, and the import duty of four annas an ounce is abolished. The prohibition on the export of silver remains.

5. The Notifications under the Defence of India Act *prohibiting the use of gold and silver coin otherwise than as currency, or dealing therein at a premium, are cancelled.

* *See* Appendix below.

Appendix to above.

(*a*) NOTIFICATION OF THE GOVERNMENT OF INDIA, No. 4071 (FINANCE AND COMMERCE), dated 11th September 1897.

In continuation of the notifications No. 2662, No. 2663, and No. 2664, dated 26th June 1893, the Governor-General in Council hereby notifies for public information that from and after the date of this notification, sovereigns and half-sovereigns of current weight coined at any authorised Royal Mint in England or Australia will be received at the Reserve Treasuries at Calcutta, Madras, and Bombay, and rupees will be issued in exchange therefor, the sovereign and half-sovereign being taken as the equivalent of 15 rupees and of seven rupees eight annas respectively.

(*b*) NOTIFICATION OF THE GOVERNMENT OF INDIA, No. 6908A, dated 11th December 1906.

Receipt by the Mints of Calcutta and Bombay of Sovereigns and Half-Sovereigns only.

In supersession of the notifications by the Government of India in the Financial Department, No. 2662, dated the 26th June 1893, and No. 3218A. dated the 14th July 1899, which are hereby cancelled, the Governor-General in Council is pleased to direct that, with effect from 1st April 1907, gold bullion and gold coins, other than sovereigns and half-sovereigns, will not be received by the Mint Masters of the Calcutta and the Bombay Mints.

(*c*) THE DEFENCE OF INDIA (CONSOLIDATION) RULES, 1915.

21A. No person shall melt, break up, or use otherwise than as currency, any current gold or silver coin.

21C. No person shall sell or purchase or offer to sell or purchase any coin for an amount exceeding the face value of such coin, or shall accept or offer to accept any such coin in payment of a debt or otherwise for an amount exceeding its face value.

Explanation.—For the purposes of this rule, the face value of a sovereign shall be deemed to be Rs. 15, and the face value of other gold coins described in section II of the Indian Coinage Act, 1906, shall be the corresponding proportion of Rs. 15.

Appendix II.

Sea-borne Trade of British India on Private Account, 1911–12 to 1923–24.

Year.	Merchandise. Imports.	Merchandise. Exports.	Merchandise. Net imports (—) or net exports.	Treasure. Imports.	Treasure. Exports.	Treasure. Net imports (—) or net exports.	Balance of trade in merchandise and treasure. Net imports (—) or net exports.	Rates of exchange. Calcutta on London T.T. selling (daily average).	Rates of exchange. Average rate obtained for Council drafts and purchases of sterling.
	Rs. lks.	Rs. lks.	Rs. lks.	Rs. lks.	Rs. lks.	Rs. lks.	Rs. lks.	s. d.	s. d.
1911–12 -	1,38,57	2,27,85	89,28	53,42	10,36	*—43,06*	46,22	—	1 4·083
1912–13 -	1,61,00	2,46,09	85,09	51,20	7,05	*—44,15*	40,94	—	1 4·058
1913–14 -	1,83,25	2,48,88	65,63	36,62	7,05	*—29,57*	36,06	—	1 4·070
1914–15 -	1,37,93	1,81,59	43,66	21,77	3,30	*—18,47*	25,19	—	1 4·004
1915–16 -	1,31,99	1,97,46	65,47	11,86	7,43	*—4,43*	61,04	—	1 4·088
1916–17 -	1,49,64	2,45,22	95,58	14,90	4,94	*—9,96*	85,62	—	1 4·148
1917–18 -	1,50,43	2,42,56	92,13	26,05	5,43	*—20,62*	71,51	—	1 4·534
1918–19 -	1,69,03	2,53,88	84,85	1,22	2,69	1,47	86,32	—	1 5·548
1919–20 -	2,07,97	3,30,06	1,22,09	11,12	7,52	*—3,60*	1,18,49	1 11·878	1 9·691
1920–21 -	3,35,60	2,58,17	*—77,43*	23,42	25,80	2,38	*—75,05*	1 8·657	2 2·042†
1921–22 -	2,66,35	2,45,44	*—20,91*	31,15	18,99	*—12,16*	*—33,07*	1 3·849	1 3·965‡
1922–23§ -	2,24,31	3,14,33	90,02	63,04*	2,78*	*—60,26*	29,76	1 3·734	1 4·200
1923–24 -	2,17,03	3,61,91	1,44,88	52,20*	3,55*	*—48,65*	96,23	1 4·460	1 4·632
1924–25 -	2,43,18	3,98,36	1,55,18	99,03*	4,91*	*—94.12*	61,06	1 $5\frac{1}{2}$	1 5·661
1925–26 (5 months)	89,68	1,58,13	68,45	20,62*	1,06*	*—19,56*	48,89	1 6	1 6·075

* Currency Notes are included from April 1922. † Reverse Councils.
‡ Daily average for London T.T.'s on Calcutta. § From 1922–23 the value of railway materials imported direct by State Railways working under Company management have been excluded.

Appendix III.

Indian Currency and Exchange.

The following announcement has been issued to-day by the Government of India :—

Removal of Restrictions on Imports of Gold into India and Rates for Reverse Drafts.

The Government of India and the Secretary of State have been in communication during the last few weeks regarding the action to be taken in view of the recent market rates of exchange, which have now not only departed from the parity of gold, but have, through lack of support from the export market, fallen below the parity of 2*s.* which will ultimately hold when gold and sterling return to parity. The effective and permanent solution of this question cannot be dissociated from the policy to be adopted in regard to gold. The Government of India are glad to announce that as from 21st June the restrictions over the import of gold bullion and foreign coin will be removed. Moreover, the Governor-General is issuing an Ordinance declaring that sovereigns and half-sovereigns will cease until further notice to be legal tender, though they will be received by Government at the present ratio of Rs. 15 during a moratorium of 21 days from this date, that is to say, up to 12th July. On the expiry of the moratorium, the restrictions over the import of British gold coin will also be withdrawn. At the forthcoming session of the Legislative Council the Government of India propose to submit a Bill prescribing the new ratio of one sovereign = Rs. 10, at which the sovereign will become again legal tender. These measures, which are in accordance with the recommendations of the Indian Currency Committee, have been rendered specially urgent by the illicit importation of sovereigns, which are smuggled across the land frontier of British India for encashment at Government Treasuries and currency offices.

2. The Government of India announce that, having regard to the fall in the market rate of sterling, the rates for Reverse Councils at the sale of 24th June and at subsequent sales will be per rupee 1*s.* $11\frac{1}{3}\frac{3}{2}$*d.* for Immediates and 1*s.* $11\frac{1}{1}\frac{1}{8}$*d.* for Deferreds, these being the rates which will ultimately hold when sterling once more returns to par with gold. At these rates 1,000,000*l.* will be sold on the 24th instant, and weekly till further notice.

The following Ordinance has been issued to-day by the Government of India :—

An Ordinance to deal with certain Gold Coin.

Whereas an emergency has arisen which makes it expedient to declare that gold coin referred to in section 11 of the Indian Coinage Act of 1906* shall cease to be legal tender and to make other provision in this connection : Now therefore in exercise of the power conferred by section 72 of the Government of India Act, 1915, the Governor-General in Council is pleased to make and promulgate the following Ordinance :—

Ordinance No. 3 of 1920.

Section 1. This Ordinance may be called the Gold Ordinance, 1920.

Section 2. Notwithstanding anything contained in section 11 of the Indian Coinage Act, 1906, the gold coin referred to in that section shall cease to be legal tender in payment or on account, provided that if any person within 21 days from the commencement of this Ordinance tenders any such coins at an office of a circle of issue established under section 5 of the Indian Paper Currency Act, 1910, he shall be entitled on demand to receive currency notes of the denominational values prescribed under that Act in exchange therefor at the rate of 15 rupees for one sovereign.

Section 3. In determining for purposes of the Indian Paper Currency Act, 1910, the value of sovereigns and half-sovereigns held in the reserve, such sovereigns and half-sovereigns shall be valued at the rate of 15 rupees for one sovereign.

India Office,
21st June 1920.

* Section 11 of Indian Coinage Act, 1906 :—

"Gold coins, whether coined at His Majesty's Royal Mint in England or at any Mint established in pursuance of a Proclamation of His Majesty as a branch of His Majesty's Royal Mint shall be a legal tender in payment or on account at the rate of 15 rupees for one sovereign :

"Provided that such coins have not been called in by any Proclamation made in pursuance of the Coinage Act, 1870, or have not lost weight so as to be of less weight than that for the time being prescribed for like coins or under the said Statute as the least current weight."

Appendix IV.

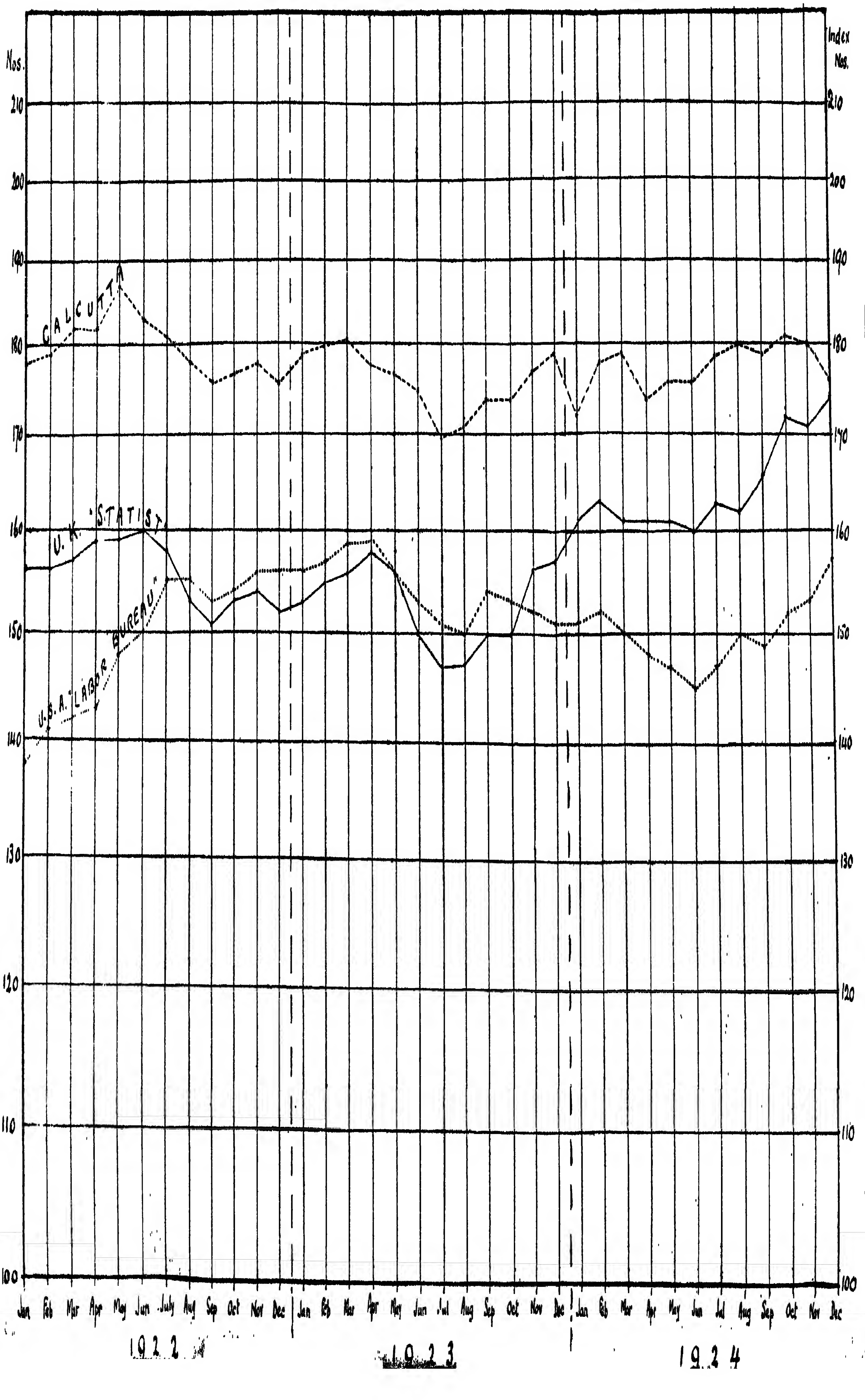
Suspension of Sale of Reverse Drafts by the Government of India.

The following announcement has been made in India :—

The Government of India have been in continuous communication during the past few months with the Secretary of State on the subject of the sale of Reverse Council Bills. Since the 1st February the note circulation has been reduced from 185 crores to 158 crores on the 15th September, and this material contraction of currency has to a large extent been rendered possible by the maintenance of the weekly offer to sell sterling drafts on London. The effect which might have been anticipated on the exchange value of the rupee by reason of the withdrawal of this substantial amount of currency has, however, been obscured by various causes, including the stagnation in the export trade and the abnormal activity in the imports into India of foreign goods. An opportunity for reconsidering the whole question has presented itself on the passing into law at the recent session of the Legislative Council of the Indian Coinage Act, rating the sovereign at Rs. 10, and the Government of India have accordingly, with the approval of the Secretary of State, decided after the sale of 28th September to withdraw for the present and until further notice the present weekly offer of sterling drafts on London. The Government of India, however, reserve to themselves the right of resuming these sales should circumstances in their opinion at any time subsequently render such resumption expedient.

India Office,
28th September 1920.

Scale based on above figures to exhibit percentage variations of price indexes from 1922 to 1924.



Appendix V.

Absorption of the various forms of currency during the five years preceding the war and the eleven subsequent years.

(In lakhs of Rupees.)

Year.	Rupees.	Notes.†	Total.	Sovereigns and half-sovereigns.	Grand total.
1909–10	13,22	5,03	18,25	4,31	22,56
1910–11	3,34	19	3,53	2,15	5,68
1911–12	11,50	4,44	15,94	13,33	29,27
1912–13	10,49	2,71	13,20	16,65	29,85
1913–14	5,32	2,65	7,97	18,11	26,08
Total for 5 years 1909–10 to 1913–14	43,87	15,02	58,89	54,55	1,13,44
1914–15	*−6,70*	*−6,01*	*−12,71*	8,43	*−4,28*
1915–16	10,40	9,23	19,63	29	19,92
1916–17	33,81	13,89	47,70	3,18	50,88
1917–18	27,86	17,22	45,08	14,26	59,34
1918–19	45,02	49,29	94,31	5,81*	1,00,12
1919–20	20,09	20,20	40,29	*−3,32*	36,97
1920–21	*−25,68*	*−5,90*	*−31,58*	*−4,38*	*−35,96*
1921–22	*−10,46*	9,35	*−1,11*	2,78	1,67
1922–23	*−9,56*	3,87	*−5,69*	9,43	3,74
1923–24	7,62	7,96	15,58	6,74	22,32
1924–25	3,65	*−2,51*	1,14	14,53	15,67
Total for 11 years 1914–15 to 1924–25	96,05	1,16,59	2,12,64	57,75	2,70,39

Sovereigns have been valued at Rs. 15 = 1*l* in the above table.

* Includes 60 on account of gold mohurs.

† These figures are based on the active note circulation, which does not include notes held in Government Treasuries and by the Imperial Bank.

Appendix VI.

Index Numbers of Wholesale Prices based on 100 in 1913.

Month.	1922.			1923.			1924.		
	Calcutta.*	U.K. *Statist.*	U.S.A. *Labor Bureau.*	Calcutta.*	U.K. *Statist.*	U.S.A. *Labor Bureau.*	Calcutta.*	U.K. *Statist.*	U.S.A. *Labor Bureau.*
January	178	156	138	179	153	156	172	161	151
February	179	156	141	180	155	157	178	163	152
March	182	157	142	181	156	159	179	161	150
April	182	159	143	178	158	159	174	161	148
May	187	159	148	177	156	156	176	161	147
June	183	160	150	175	150	153	176	160	145
July	181	158	155	170	147	151	179	163	147
August	178	153	155	171	147	150	180	162	150
September	176	151	153	174	150	154	179	166	149
October	177	153	154	174	150	153	181	172	152
November	178	154	156	177	156	152	180	171	153
December	176	152	156	179	157	151	176	174	157

* July 1914 = 100.

Appendix VII.

Note Circulation and Currency Reserve from 1920.

Date.	Gross note circulation.	Gold coin and bullion.*		Silver coin and bullion.		Total Metallic Reserve.	Per cent. of Metallic Reserve to Total Reserve (excluding Hundis).	Securities.*		Total securities.	Bills of exchange (Hundis).	Total Reserve (excluding Hundis).
		In India.	Out of India.	In India.	Out of India.			Government of India.	British Government.			
	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Per cent.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.
1920.												
Jan. 31 - -	185,15	35,10	11,62	40,33	—	87,05	47·0	15,60	82,50	98,10	—	185,15
Feb. 29 - -	183,03	41,30	4,65	38,98	—	84,93	46·4	15,60	82,50	98,10	—	183,03
March 31 - -	174,52	44,36	3,45	39,85	—	87,66	50·2	19,59	67,27	86,86	—	174,52
April 30 - -	170,74	45,38	95	39,37	—	85,70	50·2	23,77	61,27	85,04	—	170,74
May 31 - -	166,92	42,86	74	41,37	—	84,97	50·9	31,18	50,77	81,95	—	166,92
June 30 - -	164,34	43,48	2,49	45,55	—	91,52	55·7	35,55	37,27	72,82	—	164,34
July 31 - -	163,87	44,62	—	50,36	—	94,98	57·9	40,62	28,27	68,89	—	163,87
Aug. 31 - -	163,27	39,12	—	55,29	—	94,41	57·8	47,33	21,53	68,86	—	163,27
Sept. 30 - -	157,63	36,15	—	58,06	—	94,21	59·8	47,14	16,28	63,42	—	157,63
Oct. 31 - -	159,58	23,75	—	59,41	—	83,16	52·1	68,07	8,35	76,42	—	159,58
Nov. 30 - -	160,21	23,86	—	59,93	—	83,79	52·3	68,07	8,35	76,42	—	160,21
Dec. 31 - -	161,40	23,89	—	61,09	—	84,98	52·6	68,07	8,35	76,42	—	161,40
1921.												
Jan. 31 -	163,41	24,00	—	62,99	—	86,99	53·2	68,07	8,35	76,42	—	163,41
Feb. 28 -	164,60	24,06	—	64,12	—	88,18	53·6	68,07	8,35	76,42	—	164,60
March 31 - -	166,16	24,17	—	65,57	—	89,74	54·0	68,07	8,35	76,42	—	166,16
April 30 - -	167,32	24,26	—	66,65	—	90,91	54·3	68,06	8,35	76,41	—	167,32
May 31 - -	167,80	24,30	—	67,16	—	91,46	54·5	67,99	8,35	76,34	—	167,80
June 30 - -	171,76	24,35	—	71,07	—	95,42	55·5	67,99	8,35	76,34	—	171,76
July 31 - -	175,56	24,35	—	74,81	—	99,16	56·5	68,05	8,35	76,40	—	175,56
Aug. 31 - -	176,02	24,35	—	76,40	—	100,75	57·2	66,92	8,35	75,27	—	176,02
Sept. 30 - -	178,37	24,34	—	78,76	—	103,10	57·8	66,92	8,35	75,27	—	178,37
Oct. 31 - -	179,71	24,34	—	79,96	—	104,30	58·0	67,06	8,35	75,41	—	179,71
Nov. 30 - -	173,48	24,33	—	78,41	—	102,74	59·2	64,40	6,34	70,74	—	173,48
Dec. 31 - -	172,53	24,32	—	73,97	—	98,29	57·0	68,40	5,84	74,24	—	172,53
1922.												
Jan. 31 - -	174,40	24,32	—	74,84	—	99,16	56·8	69,39	5,85	75,24	—	174,40
Feb. 28 - -	173,87	24,32	—	76,27	—	100,59	57·9	67,43	5,85	73,28	—	173,87
March 31 - -	174,76	24,32	—	77,52	—	101,84	59·0	65,08	5,84	70,92	2,00	172,76
April 30 - -	171,76	24,32	—	76,51	—	100,83	58·7	65,09	5,84	70,93	—	171,76
May 31 - -	172,39	24,32	—	77,06	—	101,38	58·8	65,17	5,84	71,01	—	172,39
June 30 - -	176,01	24,32	—	80,73	—	105,05	59·7	65,12	5,84	70,96	—	176,01
July 31 - -	180,41	24,32	—	85,09	—	109,41	60·6	65,15	5,85	71,00	—	180,41
Aug. 31 - -	182,26	24,32	—	88,32	—	112,64	61·8	63,78	5,84	69,62	—	182,26
Sept. 30 - -	180,76	24,32	—	89,67	—	113,99	63·1	60,92	5,85	66,77	—	180,76
Oct. 31 - -	179,63	24,32	—	91,10	—	115,42	64·2	58,37	5,84	64,21	—	179,63
Nov. 30 - -	177,30	24,32	—	89,72	—	114,04	64·3	57,42	5,84	63,26	—	177,30
Dec. 31 - -	174,18	24,32	—	86,60	—	110,92	63·7	57,42	5,84	63,26	—	174,18
1923.												
Jan. 31 - -	172,65	24,32	—	85,06	—	109,38	63·4	57,43	5,84	63,27	—	172,65
Feb. 28 - -	173,89	24,32	—	86,29	—	110,61	63·6	57,43	5,85	63,28	—	173,89
March 31 - -	174,70	24,32	—	87,06	—	111,38	63·7	57,48	5,84	63,32	—	174,70
April 30 - -	173,37	24,32	—	83,65	—	107,97	63·0	57,55	5,85	63,40	2,00	171,37
May 31 - -	171,23	24,32	—	83,57	—	107,89	63·0	57,50	5,84	63,34	—	171,23
June 30 - -	173,61	24,32	—	85,95	—	110,27	63·5	57,50	5,84	63,34	—	173,61
July 31 - -	175,72	24,32	—	90,04	—	114,36	65·1	57,51	3,85	61,36	—	175,72
Aug. 31 - -	176,30	24,32	—	94,47	—	118,79	67·4	57,51	—	57,51	—	176,30
Sept. 30 - -	179,29	24,32	—	97,49	—	121,81	68·0	57,48	—	57,48	—	179,29
Oct. 31 - -	180,82	24,32	—	99,02	—	123,34	68·2	57,48	—	57,48	—	180,82
Nov. 30 - -	178,30	22,32	—	95,50	—	117,82	66·1	57,48	3,00	60,48	—	178,30
Dec. 31 - -	183,41	22,32	—	86,61	—	108,93	62·1	57,48	9,00	66,48	8,00	175,41
1924.												
Jan. 31 - -	184,02	22,32	—	82,18	—	104,50	59·4	57,52	14,00	71,52	8,00	176,02
Feb. 29 - -	186,19	22,32	—	80,34	—	102,66	58·9	57,53	14,00	71,53	12,00	174,19
March 31 - -	185,85	22,32	—	80,00	—	102,32	58·9	57,53	14,00	71,53	12,00	173,85
April 30 - -	181,33	22,32	—	77,49	—	99,81	58·3	57,53	13,99	71,52	10,00	171,33
May 31 - -	174,51	22,32	—	76,66	—	98,98	58·0	57,53	14,00	71,53	4,00	170,51
June 30 - -	172,49	22,32	—	78,65	—	100,97	58·5	57,53	13,99	71,52	—	172,49
July 31 - -	176,24	22,32	—	82,57	—	104,89	59·1	57,35	14,00	71,35	—	176,24
Aug. 31 - -	178,13	22,32	—	84,48	—	106,80	59·9	57,33	14,00	71,33	—	178,13
Sept. 30 - -	179,25	22,32	—	85,62	—	107,94	60·2	57,31	14,00	71,31	—	179,25
Oct. 31 - -	180,98	22,32	—	86,53	—	108,85	60·1	57,13	15,00	72,13	—	180,98
Nov. 30 - -	180,06	22,32	—	84,62	—	106,94	59·4	57,13	15,99	73,12	—	180,06
Dec. 31 - -	179,21	22,32	—	80,76	—	103,08	58·2	57,13	17,00	74,13	2,00	177,21
1925.												
Jan. 31 - -	181,11	22,32	—	77,67	—	99,99	56·5	57,12	20,00	77,12	4,00	177,11
Feb. 28 - -	183,72	22,32	—	76,28	—	98,60	53·6	57,12	20,00	77,12	8,00	175,72
March 31 - -	184,19	22,32	—	76,75	—	99,07	53·8	57,12	20,00	77,12	8,00	176,19
April 30 - -	179,61	22,32	—	74,17	—	96,49	55·6	57,12	20,00	77,12	6,00	173,61
May 31 - -	173,23	22,32	—	73,75	—	96,07	55·5	57,16	20,00	77,16	—	173,23
June 30 - -	178,25	22,32	—	78,75	—	101,07	56·7	57,18	20,00	77,18	—	178,25
July 31 - -	184,30	22,32	—	84,80	—	107,12	58·1	57,18	20,00	77,18	—	184,30
Aug. 31 - -	188,21	22,32	—	88,78	—	111,10	59·1	57,11	20,00	77,11	—	188,21
Sept. 30 - -	189,51	22,32	—	90,09	—	112,41	59·3	57,11	19,99	77,10	—	189,51

* With effect from 1st October 1920, the Gold and Sterling Securities in the Paper Currency Reserve, previously valued at Rs. 15 = 1*l*., were re-valued at Rs. 10 = 1*l*., in accordance with the provisions of the Paper Currency (Amendment) Act, 1920. The resulting deficiency in the Reserve was made up by the addition of *ad hoc* India Treasury Bills.

APPENDIX 70.

Memorandum No. 2, on "Some Considerations affecting the Stabilisation of the Rupee-Sterling Exchange," submitted by Mr. C. H. Kisch, C.B., Financial Secretary, India Office.

After the breakdown of the 2*s*. gold rupee it was always taken for granted that conditions would, in due course, arise in which it would be expedient and necessary to attempt again a permanent solution of the Indian exchange problem. The main questions that now have to be decided are :—

(*a*) whether the time is now ripe for this attempt, and

(*b*) if so, what should be the basis of the new exchange ratio ?

2. As regards (*a*), account has to be taken both of local and international factors. The historical note previously circulated has already touched upon the principal considerations that appear relevant to this issue. These appear to be as follows :—

(A) The Indian budget is a balanced budget, and, barring any unforeseen calamities, such as war or famine on a large scale, the capacity of the Government of India to maintain budget equilibrium in the future may be assumed.

(B) The Floating Debt, in the form of Treasury Bills, which at one time threatened to reach dangerous proportions, has now been extinguished, and the danger of the Government being compelled to resort to inflation on this account has disappeared. There is indeed a considerable volume of short-term debt maturing in the next few years (*vide* figures in Appendix I), but the credit of the Government of India is such that there should be no insuperable difficulty in renewing the debt on maturity by conversion operations supplemented as necessary by fresh borrowing.

(C) The stabilisation of the Indian exchange pre-supposes a substantial export surplus, which has to provide the amount required for meeting the home charges, now amounting to about 28,000,000*l*. on revenue account, *plus* any sterling capital expenditure not met by borrowing in the United Kingdom. In the five years before the war the visible balance of trade in merchandise and precious metals averaged Rs. 42·2 crores annually in India's favour. In 1923–24 and 1924–25 the corresponding figures were Rs. 96·2 crores and Rs. 61·1 crores. Assuming that no serious or sudden disturbance of world values is to be apprehended, India should be in a position to maintain a substantial export surplus in the future as in the past, though not necessarily as large as in the last two years. This remark has reference to the normal tendency of Indian trade over an extended period, and does not mean that occasions may not arise, especially in the event of monsoon failures, when the balance of trade may be temporarily adverse. Such a situation, if exhibited in a tendency of exchange to weaken below the gold export parity, called for definite action under the exchange system as in force before the war, and has to be taken into account in the formulation of any new policy (*see* (D) below).

In this connection it may be of interest to refer to certain statistics of Indian trade and price indices. For the five years before the war the average annual value of the private import and export trade in goods to and from India was Rs. 146 crores and Rs. 224 crores respectively. The corresponding figures in the years 1923–24 and 1924–25 were (imports) Rs. 217 crores and Rs. 243 crores, and (exports) Rs. 362 crores and Rs. 398 crores respectively. Allowing for the increase in import prices of 80 per cent. and 100 per cent. in each of the last-mentioned years above the pre-war figure, and about 45 per cent.* in the export values in each of the years concerned, the corresponding valuations on the basis of pre-war prices would be (imports) Rs. 121 crores and Rs. 122 crores, and (exports) Rs. 250 crores and Rs. 275 crores respectively. It would seem reasonable to expect that, if and when prices in the chief manufacturing countries fall, the volume of imports into India should increase.

* The percentages here used are based on figures taken from "Index Numbers of Indian Prices, 1861-1918" (with Addenda), published by the Department of Statistics, India. (*See* Appendix II.)

Although the satisfactory character of the Indian export trade is brought out by the above figures, it is natural to enquire, with reference to the movement of exchange, whether Indian prices stand in the same relation to world prices as they did before the war.

The Calcutta index number, which is believed to be the most reliable of the Indian general index numbers, is based on the prices of a number of individual articles, including for this purpose import and export articles. On the basis of the latest available figures (August 1925), as compared with 100 pre-war (*vide* Appendix II), the Calcutta general index number stood at 157 as compared with the *Statist* index number for the United Kingdom of 158 and the United States (Labour Bureau) index number of 160. These figures tempt the inference that Indian and world prices have now much the same relation as before the war. But it has to be remembered that the pre-war rupee exchange stood at 1*s.* 4*d.* and the rupee-dollar exchange at $32\frac{1}{2}$ cents as compared with approximately 1*s.* 6*d.* and $36\frac{3}{4}$ cents, respectively, last August. Allowing for the variation in exchange, it is necessary to raise the Indian index by one-eighth to find the comparative gold price index for India corresponding to the *Statist* figure, and the Indian figure of 157 would rise to 177 as compared with the *Statist* index of 158. This might suggest that the present level of Indian prices is too high or that the exchange is higher than price parities would warrant. On the other hand, apart from the difficulties inherent in the interpretation of index numbers, there seems to be no convincing reason for assuming that the ratio between Indian and United Kingdom prices will necessarily be the same in the future as before the war. The course of events has been different in the two countries and allowance must be made for the heavy general tariff which is now in force in India. Further, there is at present a striking disparity between the index numbers for Indian export and import articles, which last July stood at 142 and 191, respectively. The height of this last figure, which owing to the rise in exchange underrates the increase, no doubt largely explains the relatively low imports into India at the present time. But allowing for the rise in exchange from 1*s.* 4*d.* to 1*s.* 6*d.*, the export index of 142 corresponds closely with the *Statist* July number 158. Thus on the basis of the Indian export index there would seem to be no material disparity between the present and pre-war relations of British prices generally and the prices of Indian exports.

While it is difficult to draw any precise practical conclusions from this survey of recent index numbers, it may perhaps be said that they in a sense elucidate the tendencies of Indian trade as exhibited in the actual statistics of exports and imports.

(D) The stabilisation of the rupee-sterling exchange postulates that the Government should be able to provide rupees without limit at the ratio established, and that it should have the means of drawing off redundant local currency, should this be required, at any time. As regards the supply of rupees, the maintenance of the 1*s.* 4*d.* exchange was, if convertibility was not to be sacrificed, rendered impossible in the course of the war by the great rise in the price of silver. With silver at about 42*d.* per standard ounce the cost of a rupee (including minting charges) is about 1*s.* 4*d.* With exchange at 1*s.* 6*d.* the price of silver would have to rise to 47*d.* per standard ounce before the actual cost of the currency unit would amount to exchange value. If the exchange were at 1*s.* 8*d.* or 2*s.* the corresponding figures would be about 53*d.* and 63*d.* per standard ounce. Since the restoration of the gold standard in the United Kingdom, the price of silver in London has ranged between $31\frac{1}{16}$*d.* and $33\frac{7}{16}$*d.* per standard ounce.

As regards the reserves available to enable the Government to offer international exchange against payment of local currency, the position is as follows. The Gold Standard Reserve, which is invested in sterling securities, mostly with short-term maturity, amounts to 40,000,000*l.*, the actual constitution on 30th September 1925 being as shown in Appendix III. Under existing orders the reserve will not increase beyond this figure. In addition to this reserve, which has been specifically built up for the support of exchange, 20,000,000*l.* British Treasury Bills are at present held in London on account of the Paper Currency Reserve, and there is also held in India £22·3 million in gold to which recourse could be had if necessary. There are large outstanding borrowing powers* in the hands of the Secretary of State, and recourse to the London market remains open for strengthening the resources of the Secretary of State whenever required.

* Unexhausted borrowing powers on 30th September 1925 :—
For productive purposes, 64,000,000*l.*
For general purposes, 18,049,186*l.*

The question of the adequacy or otherwise of the Gold Standard Reserve will, doubtless, engage the attention of the Committee, but at present it may suffice to state that the amount of the reserve may be compared with 26,000,000*l.* which is the maximum figure held in it before the war. Moreover, at no time before the war did the amount held in the Gold Standard Reserve and the Paper Currency Reserve on this side together exceed 31,000,000*l.**

In 1919 the late Sir Lionel Abrahams inclined to the view that 25,000,000*l.* would be an adequate holding in the Gold Standard Reserve, but held that no final decision should be taken until economic conditions had returned to greater normality. Sir Henry Howard, who was at one time Financial Secretary to the Government of India, held that the aim should be to build the reserve up to not less than 40,000,000*l.*, which is the actual figure at the present time. He considered that after this total had been reached half of the subsequent accretions might profitably be diverted to capital expenditure, and that after 50,000,000*l.* had been reached all the receipts accruing to the reserve might be so utilised.

(*Vide* Question 5626, Babington-Smith Committee.)

(*Vide* Appendix D, para. 6, to Appendix I, Babington-Smith Committee.)

In Memorandum No. 1 it was explained that the average annual absorption of currency by India in the five years preceding the war was about 23 crores. In the eleven abnormal years 1914–15 to 1924–25 the average absorption was about Rs. 25 crores. What the future normal figure is likely to be cannot be foreseen. But assuming that it will be in the neighbourhood of Rs. 25 crores, it will be observed that a Gold Standard Reserve of 40,000,000*l.* represents a power of contracting the currency at an exchange of 1*s.* 6*d.* to the extent of approximately Rs. 53 crores, that is, about two years' normal absorption. Past experience suggests that, except in quite abnormal circumstances, this amount of currency contraction would be much in excess of what the market could stand without producing grave stringency, and that a much smaller amount of contraction should suffice to bring about the readjustment of credit and prices required to re-establish the exchange value of the rupee should this at any time threaten to fall away. At the same time account must be taken of the fact that normality in world conditions has not yet been established, and though it would possibly suffice to maintain a reserve of 25,000,000*l.* or thereabouts with the view to redress a weakening of exchange due to a temporary adverse trade balance, it is difficult to assess the strain that might be placed on the reserve if a prolonged period of steadily falling gold prices set in, and the Secretary of State was obliged by adverse financial conditions to draw heavily on the reserve for financing his requirements. Moreover, it is undesirable to reduce the sterling reserves to a figure which might not leave a sufficient margin for safety or might give rise to undue alarm or nervousness on the part of the public. The Babington-Smith Committee, agreeing in this respect with the Chamberlain Commission of 1913–14, held in 1919 that no limit could at that time be fixed to the amount up to which the Gold Standard Reserves should be accumulated from the profits of coinage. They considered that the settlement of this matter should await the return of normal conditions.

Since the date of the Babington-Smith Committee experience sheds little light regarding the amount at which the Gold Standard Reserve should be maintained. The sterling reserves of the Secretary of State have only once been called into play since the date of that Report, that is in 1920, when, as explained in Memorandum No. 1, an attempt was made to support exchange at 2*s.* gold, and, later, at 2*s.* sterling. The catastrophic fall in prices rendered the attempt abortive, but the fact that 55,000,000*l.* was expended in a vain attempt to support exchange in exceptional conditions is no evidence that the existing reserves are insufficient having regard to any normal contingency that may properly be provided for. It may perhaps be urged that reserves in London aggregating £60,000,000 (£40,000,000 in the Gold Standard Reserve and £20,000,000 in the Paper Currency Reserve, irrespective of Currency Reserve gold in India) represent an excessive holding. But there is force in the view that before reducing the size of the Gold Standard Reserve experience of

* This figure may be compared with the reserves held abroad by Japan. "It has been the practice, since Japan first adopted the gold standard, to keep a considerable specie reserve in New York and London. Since January 1923 the total sum so kept has diminished noticeably. In 1921 the amount was over 1,000 million yen, but in March 1924 the amount had dwindled down to 403 million yen."—The *Economic Review*, 14th November 1924 (1,000 million yen = at par of exchange about 100,000,000*l.*).

the working of a re-established exchange system over a series of years should be awaited, and in such a matter, where there is clearly scope for difference of opinion, the magnitude of the issues suggests that less harm is to be apprehended from maintaining the reserve at a high figure than from reducing it to what might prove an inadequate or inconvenient level. In dealing with this question it is necessary, of course, to have regard to the rate of exchange that it may be desired to establish in the future, and in formulating a line of policy as regards the Gold Standard Reserve it might be well to consider whether it would be desirable to regulate its growth with reference to the holding of sterling and gold in the Paper Currency Reserve.

(E) The re-establishment of the gold standard in the United Kingdom has removed one of the main difficulties that faced the Babington-Smith Committee in 1919. The experience of the period immediately following the issue of the Report showed the danger of attempting to fix the exchange value of the rupee while sterling was divorced from gold, and it has been generally recognised, since the breakdown of the Babington-Smith Committee's scheme, that it would be desirable to wait for the return of the gold standard in the United Kingdom before a further attempt was made to stabilise the rupee exchange.

3. The question, whether the time is opportune for bringing to an end the period of instability of the rupee exchange, involves consideration of the prospects of world price movements in the period ahead. In Memorandum No. 1 already referred to it has been shown that the rise in the rupee exchange in 1922–24 played an important part in securing relative price stability for India at a time when world prices were rising. The arguments in favour of regulating currency policy with a view primarily to securing price stability have been much debated in the Press and elsewhere, and undoubtedly there would be certain advantages in applying such a policy to India, where conditions are in some respects favourable for this treatment of the question; but as the United Kingdom, the sterling-using Dominions and other important European countries, have rejected the idea of basing their currency policy on internal prices and have elected to revert to the gold standard, it is scarcely a practical issue to consider a different course in the case of India. Further, Indian trade and finance are closely bound up with sterling, and there will be great and manifest advantages to Government and trade in re-establishing an effective fixed parity between the rupee and the pound now that the United Kingdom has reverted to the gold standard. Moreover, in such a matter it is necessary to pay great weight to sentiment, and there is no doubt that Indian economic and political sentiment is strongly in favour of a reversion to gold as soon as possible. It would seem, therefore, that the only justification for not bringing the Indian currency into line with the policy of the United Kingdom and the Dominions would have to be founded on an anticipation of an early or substantial change in the level of world prices, which might make it desirable to postpone for a further period the actual decision as to the rating of the rupee. The point deserves careful attention, as if the element of elasticity at present inherent in the regulation of the rupee exchange is once surrendered by linking the rupee to gold at a new parity, it would scarcely be possible to recover it, except in the deplorable event of a breakdown of the new ratio.

4. If any substantial rise in world prices is to be apprehended at an early date, the ratio of the rupee in terms of gold, determined in the light of existing factors, might prove lower than would be expedient. On the other hand, if any substantial fall in world prices is likely, the ratio, determined in the light of existing factors, might prove higher than would be conducive to India's economic interests in the long run, or might even conceivably be beyond the power of Government to render effective in the end. It is not suggested that any clear evidence exists for inclining to either of these views. There has undoubtedly been advantage in mitigating for India in 1923–24, by the rise in exchange, the effect of the rise in world prices which would have been communicated to her had the rupee been effectively linked to sterling or gold at a fixed ratio during that period, and there are obvious drawbacks, at a time when the future of world prices is obscure, in surrendering this element of elasticity in Indian currency policy. On the other hand, it is important, in the interests of Government and trade, to bring to an end the period of exchange instability as soon as there is good ground for believing that world prices are likely to remain reasonably steady. No doubt it is at present difficult to forecast future movements in the commodity value of gold, and on this fact a case might be based for a further period of delay before

taking permanent decisions regarding the rupee-sterling exchange. But, altogether apart from the natural desire to terminate the period of Government management of the currency, in the sense that it has had to be managed in the last few years, it may perhaps be assumed that the United Kingdom, and the other countries which have now returned to the gold standard, would not have done so had there not been good grounds for holding that the years immediately ahead would not witness any serious change in price levels. In this connection it is worth noting the statement by the Chancellor of the Exchequer on 28th April:—

> "We have entered a period on both sides of the Atlantic when political and economic stability seems to be more assured than it has been for some years."

Further, the importance of maintaining the commodity value of gold stable was emphasised at the Genoa Conference, and it may perhaps be anticipated that this is likely to be a subject of constant care to the principal Central Banks of the world. While, therefore, it cannot be disguised that there must be some risk in basing recommendations regarding the permanent rating of the rupee on the factors of to-day, it has to be considered if the risks are greater than it would be reasonable to take, and even if decisions were postponed for a further period the element of risk cannot be entirely eliminated whenever the actual decision is taken.

5. The bearing of India's absorption of gold on the stabilisation of the exchange will, doubtless, receive attention. Statistics are included in Appendix IV, showing the amount of India's net absorption of precious metals in recent years. The large volume of net gold imports in 1922–23, 1923–24 and 1924–25, viz., Rs. 41 crores, Rs. 29 crores and Rs. 70½ crores respectively, are noteworthy, and it is significant that, despite these large imports, exchange rose in these three years from 1*s.* 1¾*d.* gold to practically 1*s.* 6*d.* gold. With the rise in the gold value of the rupee substantially above the pre-war rating, gold has lately been cheaper in India than at any time during the past generation. It is, therefore, no matter for surprise that imports of gold have recently been on an unprecedented scale. Although efforts have been, and are being, made to encourage the investment habit in India, changes in this direction are likely to be of slow growth, and it must be assumed that with gold relatively cheap India's demand for the metal is likely to continue to be large. Imports of commodities have been relatively low in recent years, doubtless in part owing to high prices in the manufacturing countries. If gold prices decline, the tendency may be for India to take a larger part of the payment for her exports in commodities rather than in gold. The question of these gold imports has an important relation to the future of commodity value of gold, that is gold prices generally, but there does not seem any reason to think that India's absorption of gold is likely to militate against the maintenance of the rupee exchange in the future any more than it did in the pre-war period.

6. The utilisation of gold in India as currency is a separate but connected issue with a long history behind it. The views of the Babington-Smith Committee will be found in paras. 66–8 of their Report. The question of opening a gold mint in Bombay has not been a practical one in recent years owing to the exchange position being out of accord with the statutory ratio. But the issue must be expected to arise again if and when a new effective gold parity is established, and a demand may be anticipated that a branch of the Royal Mint for the coinage of gold should be reopened in Bombay, as recommended by the Babington-Smith Committee.* A new factor bearing on the case is the decision of His Majesty's Government not to give facilities for the circulation of gold coin in the United Kingdom at present.

7. If it is held that the time is appropriate for measures to be taken to stabilise the exchange value of the rupee, the question of the ratio has to be considered not from the point of view of the pre-war rating, or from the point of view of the abnormal conditions ruling towards the end of the war, but from the point of view of the ruling ratio and the parity of Indian and world prices. It is certainly a striking fact that, so far as the present writer knows, the Indian exchange is the only important exchange in the world that has appreciated in terms of gold, and it may be asked why the pre-war rate should not be re-established in India as in the United Kingdom. It is not proposed to pursue this question here beyond observing that the history of the

* *Cf.* answer to a question in the Council of State, 30th January 1924:—". . . . The Indian mints are prepared to coin gold as soon as the demand for gold currency arises, but no such demand can arise so long as the present premium on gold as compared with its statutory parity exists."

British and Indian currencies since the outbreak of war, and the economic conditions of the two countries, are widely different. The breakdown of the 1*s*. 4*d*. exchange and the progressive rise in the rupee exchange to 2*s*. and above must be regarded as having deprived the old 1*s*. 4*d*. ratio of validity. Similarly, the collapse of the 2*s*. ratio embodied in the Indian Coinage Act of 1920, and the disappearance of the conditions under which that ratio might have become effective, have deprived the 2*s*. ratio of the sanctity ordinarily attaching to currency law.

These ratios have now an historical and academic interest. If it were desired to direct currency policy towards their re-establishment, it would be necessary to justify that policy, not by arguments based on past history, but on the economic factors of the present.

8. For the purpose of this part of the discussion it has been assumed that a period of relative economic stability may be expected; otherwise it would presumably be considered inexpedient to attempt at present the permanent fixation of the rupee exchange. On this hypothesis it may be asked, what would be the effect of re-establishing an exchange rating of 1*s*. 4*d*.? Seeing that the rupee exchange has now ruled at about 1*s*. 6*d*. for some time, it must be presumed that the adjustment of prices and wages in India to this ratio has been continuously in progress, and that a permanent lowering of exchange would involve a serious disturbance of values. Doubtless the period of falling exchange would result in immediate profit to some industries, which would be able to increase the rupee price of their products without at once having to meet a corresponding increase in the costs of production. As regards these costs experience has shown that adjustments of wages in due course follow a rise in the cost of living, and the temporary advantage disappears on the readjustment of costs and wages to the reduced purchasing power of money. It may be asked whether it would be necessary or expedient to increase the nominal wages of Indian labour, urban or rural, in the event of a decline in the purchasing power of the rupee. This is a question on which first-hand evidence is more readily obtainable in India than in this country, where up-to-date statistics are not available. Figures for the year 1922 from the Bombay Presidency tend to show that the real wages of labour have risen since 1914, except in the case of field or ordinary labour in rural areas, the largest increase, that of ordinary urban labour, having been about 12 per cent. The bearing of this position on the Indian cotton industry, subjected to vigorous Japanese competition, may be developed by witnesses in India. Others will be in a position to speak of the importance of maintaining the standard of living of the workers.

9. From the point of view of Government a reduction of the exchange ratio from 1*s*. 6*d*. to 1*s*. 4*d*. would have far-reaching reactions throughout the administration. One immediate effect would be to increase the burden of the home charges by approximately Rs. 6 crores per annum, which would militate against the execution of important financial measures that the Government of India have in view. The Local Governments would also suffer severely from any rise in general prices consequent on a decline in exchange. This would again upset financial equilibrium, and the process of readjustment would raise fresh and embarrassing problems affecting the incidence of taxation. It should be noted in this connection that an important part of their income is derived from the land revenue, which is either permanently fixed or only capable of slow expansion over an extended period.

10. There are also objections, assuming again that the period ahead is one of economic stability, to directing policy towards enhancing the exchange value of the rupee. Such a policy would, if it became effective, involve the reduction of the rupee prices of Indian produce, and would inflict a serious tax on industry until costs had been reduced in correspondence with the increased purchasing power of the rupee. This process would impose an unnecessary strain on industry at a time which is generally recognised to be a difficult one for business. It has to be remembered that the recent rise in exchange to 1*s*. 6*d*., as has been pointed out in Memorandum No. 1, has been assisted by the rise in world prices which enabled the exchange value of the rupee to rise without involving any great change in its internal purchasing power. From the point of view of the Government of India, a rise in the rupee exchange from 1*s*. 6*d*. to a higher rate would of course lead to a reduction in the cost of providing for the home charges, but there would seem no justification for

making this a governing consideration in dealing with the Indian exchange and for exposing Indian trade in the process to grave risks and uncertainty. It will also be realised that any announcement of the intention of Government to stabilise the exchange at a ratio either above or below the ruling rate would be likely to introduce disturbing factors into business and to encourage speculation.

11. The above arguments point to the conclusion that, if it were desired to-day to stabilise the rupee exchange, this should be done with reference to the ruling rate, viz., 1*s*. 6*d*., *i.e.*, the sovereign would be equivalent to Rs. 13⅓ and the gold rating of the rupee would be 8·47512 grains of fine gold.*

Figures showing the market rate of exchange in recent months will be found in Appendix V. As regards these it will be observed that the rate has ruled in the neighbourhood of 1*s*. 6*d*. since October 1924, and it must be assumed that prices and wages have been adjusting themselves to this rate throughout the period from this date. Moreover, in the absence of unforeseen developments, there would appear to be no abnormal risks in a policy aiming at stabilisation at this level.

12. These observations apply, of course, to existing conditions. The situation may conceivably change before the Commission reports, and it may be necessary to modify in important respects the views provisionally expressed above in the course of any later evidence that the Commission may require.

* This rating, it may be observed incidentally, furnishes a relatively convenient parity for expressing a sovereign in terms of rupees and a rupee in terms of pence. If, however, conditions pointed to stabilisation at some other point which did not furnish these two facilities and a choice had to be made between them, the advantages of being able to convert the sovereign into an exact equivalent in Indian currency, especially if it is made legal tender in India, deserve to be emphasised.

Appendix I.

Rupee Debt of the Government of India maturing from 1926 to 1935. Amounts outstanding on 31st March 1925, modified as a result of Conversion Loan of 1925.

	Rs. lakhs.
6 per cent. Five Year Bonds, 1926 - - - -	20,14
6 per cent. Five Year Bonds, 1927 - - - -	20,01
5½ per cent. War Bonds, 1928 - - - -	21,83
6 per cent. Ten Year Bonds, 1930 - - - -	29,28
6 per cent. Ten Year Bonds, 1931 - - - -	11,31
6 per cent. Ten Year Bonds, 1932 - - - -	19,49
5 per cent. Ten Year Bonds, 1933 - - - -	21,46
5 per cent. Ten Year Bonds, 1935 - - - -	4,71
Total - - -	1,48,23

APPENDIX II.

Index Numbers of Wholesale Prices based on 100 in 1913.*

—	India exported articles. (a)	India imported articles. (b)	General Index Numbers. Calcutta. (c)	U.K. "Statist."	U.S.A. Labor Bureau.
1923, January	149	183	179	153	156
February	147	187	180	155	157
March	149	185	181	156	159
April	147	185	178	158	159
May	143	186	177	156	156
June	140	181	175	150	153
July	140	178	170	147	151
August	135	175	171	147	150
September	136	181	174	150	154
October	138	182	174	150	153
November	138	184	177	156	152
December	145	187	179	157	151
Average for 1923	145	179	176	152	154
1924, January	142	186	172	161	151
February	140	202	178	163	152
March	142	224	179	161	150
April	141	224	174	161	148
May	141	209	176	161	147
June	142	215	176	160	145
July	145	216	179	163	147
August	150	214	180	162	150
September	153	211	179	166	149
October	151	205	181	172	152
November	152	196	180	171	153
December	150	200	176	174	157
Average for 1924	146(d)	209(d)	177	164	150
1925, January	149	200	171	170	160
February	146	198	172	168	161
March	149	198	168	165	161
April	147	199	169	162	156
May	147	197	164	160	155
June	145	189	157	154	157
July	142	191	160	158	160
August	—	—	157	158	160

* The first two columns of figures are based on figures taken from "Index Numbers of Indian Prices, 1861–1918" (with Addenda), published by the Department of Statistics, India. The figures in the next column, giving the Calcutta Index number, are percentages of the prices in July 1914.

(a) The index number of India exported articles is unweighted and is based on the average of the wholesale prices of 28 articles, including grains, seeds, tea, castor oil, jute, cotton, raw silk, wool and hides, skins, coal, lac, saltpetre and indigo.

(b) The index number of Indian imported articles is unweighted and is based on the average of the wholesale prices of 11 articles, including sugar, salt, cotton piece goods and yarn, raw silk, iron, copper, spelter, coal and kerosene oil.

(c) The Calcutta general index number is the arithmetic average of the ratios of the individual prices of 16 groups of 45 articles. The index is not weighted except in a crude way by allowing two or more quotations for certain important commodities, 73 quotations being taken in all.

(d) The actual averages for 1924 may differ slightly from these figures, which are averages of the monthly figures in this table.

APPENDIX III.

Gold Standard Reserve. Composition on 30th September 1925.

In England.	£
Cash at Bank of England - - - - - -	1,399
British Treasury Bills - - - - - -	10,529,931
Securities maturing within the next two years - -	7,398,670
Securities maturing in more than two and less than five years	20,150,215
Securities maturing in more than five and less than 10 years	959,606
British War Loan, 1929–47 - - - - - -	960,179
	40,000,000
In India - - - - -	Nil.
Total - -	£40,000,000

APPENDIX IV.

Indian Sea-borne Trade in Gold and Silver on Private Account.

NOTE.—The figures in this table exclude transactions which do not enter into the balance of trade.

Year.	GOLD.			SILVER.			TOTAL.
	Imports.	Exports.	Net Import or Net Export.	Imports.	Exports.	Net Import or Net Export.	Net Import or Net Export.
	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.
1909–10 - -	25,01·8	3,34·9	*21,66·9*	12,40·9	3,04·5	*9,36·4*	*31,03·3*
1910–11 - -	27,89·3	3,91·4	*23,97·9*	11,77·5	3,20·4	*8,57·1*	*32,55·0*
1911–12 - -	41,49·4	3,72·6	*37,76·8*	11,92·9	6,63·5	*5,29·4*	*43,06·2*
1912–13 - -	41,29·1	3,71·2	*37,57·9*	9,90·7	3,33·4	*6,57·3*	*44,15·2*
1913–14 - -	28,22·6	4,90·3	*23,32·3*	8,39·4	2,14·9	*6,24·5*	*29,56·8*
1914–15 - -	10,70·4	2,24·9	*8,45·5*	11,06·7	1,05·4	*10,01·3*	*18,46·8*
1915–16 - -	5,24·4	35·0	*4,89·4*	6,61·1	1,03·5	*5,57·6*	*10,47·0*
1916–17 - -	4,26·0	6·2	*4,19·8*	1,56·0	3,72·0	2,16·0	*2,03·8*
1917–18 - -	21,46·8	0·9	*21,45·9*	2,37·8	92·2	*1,45·6*	*22,91·5*
1918–19 - -	2·6	0·3	*2·3*	6·0	0·3	*5·7*	*8·0*
1919–20 - -	32,63·6*	Nil	*32,63·6**	15·2	30·0	14·8	*32,48·8**
1920–21 - -	45,87·1†	21,17·7	*24,69·4†*	10,69·7	3,28·0	*7,41·7*	*32,11·1†*
1921–22 - -	13,82·0	16,61·3	2,79·3	17,29·1	2,33·6	*14,95·5*	*12,16·2*
1922–23 - -	41,31·4	13·3	*41,18·1*	20,71·4	2,53·8	*18,17·6*	*59.35·7*
1923–24 - -	29,25·3	6·7	*29,18·6*	21,78·1	3,40·0	*18,38·1*	*47,56·7*
1924–25 - -	70,95·0	36·2	*70,58·8*	24,26·0	4,20·3	*20,05·7*	*90,64·5*
1925–26 (first 5 months).	12,26·1	13·6	*12,12·5*	8,19·9	73·7	*7,46·2*	*19,58·7*

* Includes as an import Rs. 21,66·5 lakhs—the value of gold sold in India by the Government of India.
† „ „ „ Rs, 33,83·1 „ „ „ „ „ „ „ „

APPENDIX V.

Rates of Exchange for Calcutta Telegraphic Transfers on London (average of daily rates).

Month.	1920.		1921.		1922.		1923.		1924.		1925.	
	s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
January - -	2	$3\frac{7}{8}$	1	$5\frac{7}{16}$	1	$3\frac{27}{32}$	1	$4\frac{9}{32}$	1	$5\frac{3}{16}$	1	$5\frac{15}{16}$
February - -	2	$8\frac{1}{8}$	1	$4\frac{3}{32}$	1	$3\frac{17}{32}$	1	$4\frac{1}{4}$	1	$4\frac{29}{32}$	1	$5\frac{31}{32}$
March - -	2	$4\frac{3}{4}$	1	$3\frac{5}{16}$	1	$3\frac{9}{32}$	1	$4\frac{3}{32}$	1	$4\frac{11}{16}$	1	$5\frac{15}{16}$
April - -	2	$3\frac{11}{16}$	1	$3\frac{5}{8}$	1	$3\frac{5}{32}$	1	$4\frac{1}{8}$	1	$4\frac{3}{4}$	1	$5\frac{27}{32}$
May - -	2	$1\frac{7}{16}$	1	$3\frac{3}{8}$	1	$3\frac{17}{32}$	1	$4\frac{3}{32}$	1	$4\frac{27}{32}$	1	$5\frac{15}{16}$
June - -	1	11	1	$3\frac{13}{32}$	1	$3\frac{9}{16}$	1	$4\frac{3}{32}$	1	$4\frac{15}{16}$	1	$6\frac{1}{32}$
July - -	1	$10\frac{1}{32}$	1	$3\frac{9}{32}$	1	$3\frac{5}{8}$	1	$4\frac{3}{32}$	1	$5\frac{5}{32}$	1	$6\frac{3}{32}$
August - -	1	$10\frac{13}{32}$	1	$4\frac{3}{32}$	1	$3\frac{19}{32}$	1	4	1	$5\frac{7}{32}$	1	$6\frac{3}{23}$
September - -	1	$10\frac{1}{32}$	1	$5\frac{5}{32}$	1	$3\frac{19}{32}$	1	$4\frac{1}{8}$	1	$5\frac{15}{32}$	1	$6\frac{5}{32}$
October - -	1	$7\frac{23}{32}$	1	$4\frac{29}{32}$	1	$3\frac{5}{8}$	1	$4\frac{13}{32}$	1	6		
November - -	1	$7\frac{9}{32}$	1	$4\frac{5}{32}$	1	$3\frac{13}{16}$	1	$4\frac{27}{32}$	1	$5\frac{15}{16}$		
December - -	1	$5\frac{3}{32}$	1	$3\frac{7}{8}$	1	$3\frac{31}{32}$	1	$5\frac{1}{16}$	1	$6\frac{1}{32}$		
Average for year	2	$0\frac{3}{32}$	1	$4\frac{1}{32}$	1	$3\frac{19}{32}$	1	$4\frac{9}{32}$	1	$5\frac{1}{4}$	1	6 (9 months)

APPENDIX 71.

Memorandum No. 3, on "Note on Proposals for promoting a Gold Currency in India," submitted by Mr. C. H. Kisch, C.B., Financial Secretary, India Office.

The introduction of gold as the sole metallic unlimited legal tender, and the conversion of the rupee into a limited legal tender, involve a complete departure from established custom. It could not be expected that the change could be given effect to without difficulties, and it is necessary to consider carefully whether it offers advantages commensurate with the obstacles that would have to be surmounted and the risks that could not be avoided.

It is proposed to examine the scheme from the following points of view :—

1. Character of the objective.
2. Nature of disturbance involved.
3. Security of Government during process.
4. Cost.
5. Alleged defects in pre-war system.

Character of the objective.

In para. 8 of his memorandum on "A Gold Standard for India," Mr. Denning states that "undoubtedly the ideal to be aimed at is the system now in force in Great Britain, under which the Note is the sole full legal tender in circulation, and the gold value of sterling is stabilised by the statutory obligation imposed on the Bank of England to buy and sell gold at rates corresponding roughly to the par of exchange."

This "ideal" seems, however, to be rather lightly thrown over in the statement that "it is impossible to hope that conditions in India will for generations be such that a full legal tender metallic currency will be no longer necessary," or rather in the proposition treated as following therefrom, that a gold currency should be established. India has already the beginnings of the "ideal" system in (i) the accepted use of a token coin instead of a full value coin, (ii) the very widely accepted use of notes, and (iii) an unmistakable tendency in recent years to rely less on coin and more on notes. The expansion of the note issue has been one of the most satisfactory features in later currency developments. In particular it is worth noting the large proportion of 10-rupee notes in circulation.* The true wisdom seems to be to continue on the lines on which such remarkable progress has already been made.

These remarks do not imply that gold coinage should not be undertaken in India if the people of India desire that the gold which they import should be stamped in small units with the Government hall-mark of fineness and weight, and be available on occasion as legal tender. But there is all the difference between the admission of gold as legal tender but without an obligation to issue it except in return for bullion, and forcing the people away from a currency to which they are accustomed, and pressing upon them a new currency of a more costly character, whose free circulation it may be difficult to ensure. In so far as the Indian currency system involves the use of gold, the best place for the gold is in reserves, and it seems retrograde to propose for India a gold circulation which is now regarded as obsolescent in Europe.

It is worth considering how far, in the case of a country like India, there is any reality in contemplating the limitation of the legal tender quality of the rupee. It is apparently considered, and reasonably so, that 150 crores of rupees might be required in circulation if the rupee became a limited legal tender. If for any reason there was a return of currency in circulation, it may be assumed that the return will include at any rate a due proportion of rupees. In the case of a country like India, where cash transactions of a small amount form a large part of the daily business of the country, would it be a practicable thing for the Imperial Bank to refuse to accept rupees from other Banks or for Government to refuse to relieve the Imperial Bank of redundant rupee currency? It is suggested that even if the attempt were made to force a gold circulation and to limit the legal tender quality of the rupee, the rupee would still continue in practice to be an unlimited legal tender. Indeed it may be asked whether there is any substance in the conception of a limited legal tender rupee in the case of India where the rupee circulation is bound to play for an indefinite period such an important part in the economic life of the people.

The propriety of Government setting a term to the unlimited legal tender quality of the rupee in the case of a country like India also requires consideration.

Nature of disturbance involved.

The disturbing effects of the proposed plan are far-reaching.† In India the rupee has for generations been an unlimited legal tender. It seems that, if once the idea spread that this quality in the rupee is to be taken away, the result would be to bring the rupee

* On 31st March 1925 the circulation of Rs. 10 notes (Rs. 68·5 crores) formed 40·5 per cent. of the total circulation. The Rs. 10 and Rs. 5 notes formed 50 per cent. of the total circulation.

† It will, of course, affect territories outside India using the rupee.

into disrepute. It is admittedly not possible to form an accurate estimate of the number of rupees that will be presented for exchange into gold under the scheme suggested. All one can say is that the bullion dealers of India are not likely to miss the opportunity that so radical a change in the currency policy will afford. Their obvious interest will be to discredit the rupee and collect as many rupees as they can from all quarters for exchange, and it may be assumed that the peasantry will pay liberal commissions in the process. The limitation of the exchange to gold bars of 400 ozs., the value of which at 1*s*. 6*d*. the rupee is less than Rs. 23,000, would not give protection, as the point could be met by clubbing and the concerted operations of Indian dealers.

The possible effect of the offer to give gold for notes does not appear to be appreciated in the calculations regarding the amount of gold required to bring the scheme of a gold circulation into operation. The speculative element here is of the gravest possible kind. The other estimates—of 110 crores of rupees as the total amount likely to be presented, of 50 crores of gold as the initial stock, &c.—are (inevitably) not very securely based. But in this matter of the possible extent of the substitution of gold for notes, no estimate is possible at all and no practical limitation can be set.

No indication as to the time that might elapse between stage 1 and stage 2 is given. It is certainly possible that the scheme might have to be abandoned before it got beyond stage 1, that is, the stage in which gold bullion is being supplied for non-currency purposes. It is submitted that a scheme of currency reform of which the progress is so uncertain and of which the process is so extended—a most objectionable feature in itself—could only be justified if by no other means a sound system meeting the requirements of the country could be provided.

It is recognised that the large additional drain of gold to India over the ordinary demand, which is already large, might seriously affect gold prices, and it is suggested that it would probably be necessary to make special arrangements with the Bank of England and the Federal Reserve Board of the United States. It is difficult to form a view as to the future trend of gold prices, which turns largely on the policy that may be pursued by the great Central Banks. But with the gradual return of the nations of Europe to gold the markets for the metal are increasing, and the tendency may be for countries to add to their stocks as opportunity offers with the object of strengthening their note reserves. Is it safe to set aside altogether the possibility of a fall in gold prices, especially if the demand for gold was increased by additional requirements for India for the purpose of providing a gold circulation?

If the solution of India's exchange problem is to be essayed while world conditions are still unstable, it would seem inopportune to add to the risks by any action that might tend to cause a rise in the value of gold.

The Bank of England and the Treasury will, it is assumed, have the opportunity of expressing their views as to the effect that the scheme might be expected to have on the position of gold and sterling.

The attitude that the United States authorities are likely to adopt towards the proposal is a matter for conjecture, but there is one factor in the case which may be expected to prejudice them against it. The silver-producing interests in the United States are a powerful body, and the various Acts, ending with the Pittman Act, passed for their protection, suggest that they are not likely to view without dismay and protest the threat to the silver market involved in the suggested sale of approximately Rs. 200 crores of silver, or three years' production, within ten years. The proposal really means that the silver which the United States Government were induced to supply to India at a time of great emergency is to be thrown back on to the market. The reactions on China (including her imports from India) of influences tending to depress the price of silver continuously are also worthy of notice.

Security of Government during process.

It will be observed that the scheme contemplates that the sterling reserves should be used up and resort be had, if necessary, to external borrowing in order to secure the supply of gold to India. What would happen if at an early stage in the progress of the scheme India was affected by the unfortunate vicissitudes to which she is liable? An adverse trade balance would obviously suspend progress for the time being Additional external borrowing might become necessary, *pro tanto* diminishing the power of India to draw gold on the recovery. How far gold in India would be exported is uncertain. The presumption is that the return of currency for conversion into foreign exchange would tend to take the form of notes and silver rather than gold, and the attenuated reserves might be unequal to the strain. The position of the Secretary of State might be embarrassed. The credit of India might be prejudiced, as the confidence of investors would presumably be affected by the non-existence of the large sterling reserves hitherto maintained. In short, the possibility that India would find herself in serious difficulties during the 10 years spent in crossing the stream cannot be overlooked.

As regards the reserves, it is contemplated that during the early stage of the scheme the gold and sterling in the Paper Currency Reserve might be reduced to Rs. 56·9 crores, and apparently this would, either in its entirety or in the main, be held in sterling securities.

This low percentage (30 per cent.), of which at best only a small proportion would be gold, seems inadequate from the point of view of the convertibility of the note and the maintenance of exchange.

Sir Basil Blackett, with the object of "reducing the cost" of the scheme, suggests that the reserve might eventually contain a metallic backing of about 22·5 per cent., and that the gold and sterling assets might amount to about 50 per cent. Here two points may be noted:—

(1) The metallic percentage is far lower than has hitherto been regarded as provident for India, and is even lower than that recognised by the United States of America. The right to require conversion of notes into gold may lead on occasion to heavy encashments of notes by the public, possibly heavier than when payment normally took the form of rupees. There should be no possible question as to the adequacy of the available amount, which should be determined with reference to the possible obligations of the reserve and not with reference to the cost of a scheme for introducing a gold circulation.

(2) After the gold circulation is established, the active circulation would apparently, on the data assumed, consist of about 190 crores notes, 50 crores gold, and 150 crores of rupees, as compared with 190 crores of notes and 200 crores of rupees under a gold exchange standard. It has been suggested above that, under the projected plan, the rupee will in practice continue to be used as an unlimited legal tender in much the same way as at present. A reflux of currency from circulation will presumably comprise at least its due proportion of rupees, as the tendency will doubtless be for such gold as may be functioning as currency to be retained, as far as possible, by the public. In effect, the reserves will have to guarantee not only the exchange value and the internal convertibility of the note, but will also have to support a rupee circulation of about two-thirds or three-quarters as large as that now functioning as money. The Indian official memoranda make no provision for the rupees outstanding. Possibly the view taken is that the redemption of a certain quantity of rupees in gold will have removed the risk of redundant rupees or that a reflux of gold will provide additional support to the exchange. It is doubtful how far assistance will be forthcoming from a return of gold, largely issued to take the place of rupees now forming a store of value. But it is evident that, if the total currency is at any time redundant and a contraction is necessitated to reduce the Indian price level to that of external gold prices, this contraction must be effected on the active circulation, the rupees in which will presumably contribute their quota to the necessary aggregate withdrawal. The size of the reserves must therefore have regard not only to the note issue but to a possible return of part of the unbacked rupee circulation also.

Cost of the Scheme.

Any estimate of cost must be largely conjectural, and would be liable to be upset if the demand for the conversion of rupees and notes into gold should exceed anticipation, or if it was found expedient to hold a larger gold reserve throughout, or if the sales of silver had to be spread over a longer period than proposed. In any case, it would seem from the calculations in the note annexed to this paper that a scheme framed on the lines of Mr. Denning's note would entail, apart from the transitional expense, a permanent charge, which may be conservatively put at about Rs. 3 crores per annum and might in certain circumstances exceed this amount. India is not a country that can afford luxuries. The administration is held up on all sides by paucity of funds; yet it is seriously suggested that India might be asked to incur, for the purposes of supplying currency which would perhaps largely go underground, a high capital loss and a substantial recurring charge. The currency authorities in the United Kingdom have formed the view that it is inexpedient to reintroduce a gold circulation into the United Kingdom, a relatively rich country habituated to such a currency before the war, the fact being that such a currency would be difficult to obtain in present circumstances and would be too expensive.* Can India afford it?

One point in the Indian memoranda calls for further remark with reference to the cost question. By reconstituting the Paper Currency Reserve with a lower proportional backing of real assets and reducing the non-interest bearing proportion of those assets, it is sought to lessen the cost of introducing a gold circulation. Unless the reduction of the real assets and the non-interest bearing amounts are themselves made feasible by the introduction of a gold circulation, it does not seem correct to regard these factors as a source of saving. Obviously, if the real assets are excessive under to-day's conditions and admit, either in the aggregate and/or as regards non-interest bearing amounts, of safe reduction, then the apparent saving from associating the reduction with the introduction of a gold circulation is to that extent illusory.

Alleged defects of pre-war system.

The difficulties in the way of the scheme are formidable enough and ultimate success is problematical. Before the Government sets its hand to so precarious a task, it is necessary to examine closely the grounds on which the new departure is deemed desirable.

* Cf. paras. 42 and 43 of Report of Committee on the Currency and Bank of England Note issues, Cmd. 2393/1925.

The proposal to make gold the principal metallic medium of the currency apparently arises from a desire to remove what are described as "the main defects of the pre-war currency and exchange system," which are referred to in the remarks below:—

(A) "*The maintenance of the system was dependent on the price of silver remaining at such a figure that the bullion value of the rupee was not higher than its exchange value.*"

The stabilised 1*s.* 4*d.* rupee, whose effective life covered about 20 years, undoubtedly witnessed remarkable economic progress in India, and, apart from the confusion caused by the war, there seems no reason to doubt that it would have endured to this day. The war broke down the gold standard in countries where it appeared solidly established, and it certainly cannot be assumed that if India had been on a gold standard with gold currency when the war began she would have fared better than she actually did. Had India been on such a standard, and had it been possible or expedient to maintain it (regarding which some remarks follow), she would have been exposed to the full violence of the oscillations of gold values during the war and post-war periods. It is reasonable to hold that any rise in the price of silver to a point which would threaten a 1*s.* 6*d.* rupee would almost certainly be due to a catastrophic depreciation of the purchasing power of gold, and would be an element in a general rise of prices of an untoward kind. The evils of rising prices in the case of India were discussed by the Babington Smith Committee (paras. 47 and 48), and have been recognised fully in the conduct of recent exchange policy by the Government of India. It might well be that, if the economic history of 1914–20 were repeated, India's policy ought in her own exclusive interest to be directed to staving off some of the effects of gold depreciation by a modification of her exchange.

It should also be noted that, with 150 crores still in circulation, whether the rupee is unlimited legal tender or not, a rise in the price of silver above the bullion value of the coin might in certain circumstances create a situation resembling that which occurred during the war.

The fact that the 1*s.* 4*d.* rupee was broken in the late war is not to be regarded so much as a defect of the gold exchange standard as of a defect of gold as a basis of value at the mercy of Governments which, at a time of national emergency, may be constrained to sacrifice currency ideals normally held dear. Assuming that gold is the best practicable standard of value that the wit of man has hitherto found it feasible to adopt, it must be recognised that it is not perfect and that no country can escape from the risks of these imperfections whether its standard is based on a gold circulation or on the maintenance of its exchange at a fixed gold parity without such circulation. It is perhaps worth observing that the introduction of a gold currency in circulation militates against the power to promote stability of internal prices at exceptional times when gold prices may be undergoing violent disturbance. In such a case action would presumably take the form of the suspension of the obligation to buy gold at the Mint par and the conversion of the standard coin into an over-valued gold token.

(B) "*The rupee was in reality linked to sterling only, and the system ceased to be a gold exchange standard as soon as sterling depreciated.*"

When, as in pre-war days, gold and sterling were synonymous, and the Government of India was under an obligation to receive gold coin at a fixed price, it seems difficult to contend that the rupee was linked to sterling only. The second part of the statement does not appear to amount to more than an assertion that when sterling depreciated, the authorities for a time did not, in fact, endeavour to dissociate the rupee from the fortunes of sterling.

But some further observations seem required.

(1) If, for purpose of illustration, the rupee had been linked to the dollar at a fixed ratio, and it had been possible to maintain this ratio during the war years and subsequently, it may be asked whether India would have benefited thereby. Adherence to the fixed ratio would have exposed her to the extremes of the fluctuations in the purchasing power of gold, and would have prevented the Government of India from affording such relief as it has now been possible to afford by permitting the rise to 1*s.* 6*d.* gold. The argument may, perhaps, be even more clearly appreciated if one imagines what would have happened if the monetary policy of the United States of America in 1920 had been directed towards the maintenance of the then level of gold prices.

(2) In framing a permanent currency policy for India it is suggested that due weight must be assigned to the probable identity in the future of sterling and gold. The special character of Indian external trade, which is mainly financed in sterling, gives force to this consideration.

(3) If India had enjoyed a gold standard based on a gold circulation at the outbreak of war, it is open to question what her subsequent policy would have been. When the existence of the Empire was in jeopardy and India's own future hung in the balance, would it have been consistent with India's own interest to have sought to add to the drain on the limited supplies of gold available when its conservation was a vital matter for the purpose of employment in foreign quarters? If, under some national stress or emergency, sterling were again to become divorced from gold, the action to be taken by India cannot be prejudged, but would have to be determined in the light of the actual circumstances.

(C) "*A fall in the rate of exchange was prevented by the sale of Reverse Councils, but Government were under no statutory obligation to take such action.*"

The pre-war exchange system admittedly did not impose on Government a statutory obligation to redeem local currency by payment of international exchange. This, however, must not be interpreted to mean that the Government is not prepared to undertake formal and public commitments on the subject. (Compare announcement issued in connection with Babington-Smith Committee's Report.) This point is referred to in the last paragraph of the Memorandum No. 5 on "Remittances," and the remedying of the "defect" does not involve the removal of its unlimited legal tender quality from the rupee or the promotion of a gold circulation.

(D) "*When exchange dropped to the lower gold point, there was no automatic decrease in the currency tending to strengthen exchange, but such decrease depended on the action of Government.*"

It is well understood that under the gold exchange standard the employment of the Gold Standard Reserve in connection with the sale of reverse Councils for the support of exchange, or the use of the sterling assets of the Paper Currency Reserve for replenishing the Secretary of State's balances, involve a corresponding currency contraction in India. It is a legitimate question to ask whether this view was embodied with due formality in the currency constitution, but there is no reason why, under the gold exchange standard, the same influences for contracting the currency should not be brought into operation as under the gold standard in the ordinary accepted sense of the term.

How far the element of discretion inherent in the Indian system as hitherto applied is open to criticism is not so clear. It is part of accepted theory that contraction of the internal circulation should be the regular sequel of withdrawals of sterling from the reserves, and an exception would presumably only be made owing to some such overriding consideration as the danger of creating an excessive stringency in the Indian market.*

Under the gold standard, continued losses of gold by the Bank of England force it to take steps for a general contraction of credit in order to protect its reserves, but it is perhaps a matter of opinion as to how far action can be regarded as "automatic." The stage at which measures are taken rests within the discretion of the Bank, and it is obvious also that the course of events depends in part on the readiness of the large lenders of money not to counter the policy of the Bank by, for example, decreasing the cash ratio on which they conduct their business. In fact, it is hardly possible to conceive any system based on credit that is purely automatic. The efficient working of the gold standard depends, as did the efficient working of the gold exchange standard, on the wisdom and judgment of those in authority. This is apparent not only from recent events in Europe, but also in a noteworthy manner from the action of the Federal Reserve Board in America, who have had to take special steps to prevent a great influx of gold from exerting on prices its normal influence.

(E) "*As the currency reserves were divorced from the banking reserves, effective regulation of the money market was impossible.*"

The implications of the observation will be referred to in another connection. But in any case the so-called "defect" presumably is due to the fact that the note issue was controlled by the Government and not by the banking authorities. It is not traceable to a gold exchange standard as such.

If an attempt is made to summarise the above comments regarding the five "defects" of the gold exchange standard, it would seem fair to say that (E) is a separate issue concerning the character to be given in present circumstances to the functions of the Imperial Bank; that as regards (C) and (D) there is nothing in the gold exchange standard as such which precludes the reproduction of conditions corresponding to those applying to the gold standard as ordinarily understood. (A) and (B), which are connected, are obviously suggested by recent experience examined through war-tinted spectacles. The removal of "defect" (B) does not require a gold circulation. "Defect" (A) is theoretically inherent in any token coin. The problem it occasioned during the war arose not from a defect of the gold exchange standard, but from an imperfection in gold as the basis of value. Indeed these two so-called defects in the gold exchange standard were altogether latent before the war, and no practical question would probably have now emerged in regard to them were it not for the experiences of recent years.

It is, of course, right and desirable that whatever currency system is given to India, it should be made proof against eventualities, so far as these are within the range of reasonable contingency; but the war, with its devastating effects on currencies generally, undermined even the basis of the gold standard. In laying down a currency constitution for India, due weight should be attached to the altogether exceptional character of the war period.

On a review of the main considerations involved it is suggested—

(1) that from the point of view of the interests of India the objective of a gold circulation and a limited legal tender rupee is wrongly conceived, and that the scheme would, in all probability, fail to achieve its purpose;

* Compare the position that arose in 1920 in the period when an attempt was being made to give effect to the recommendations of the Babington-Smith Committee.

(2) that the arguments directed against the gold exchange standard do not justify the rejection of the general currency scheme which served India well before the war; and

(3) that the drawbacks inherent in the scheme for a gold currency altogether outweigh any possible benefit to be anticipated from its promotion.

If avoidable risks are taken by the authorities and needless expense on what would be a serious scale is incurred, India might too late have cause to appreciate the warning of the opening lines of Dr. Leyden's "Ode to an Indian Gold Coin":—

"Slave of the dark and dirty mine!
What vanity has brought thee here?
How can I bear to see thee shine
So bright whom I have bought so dear?"

Pre-war experience suggests that, if India must for long years to come have a full legal tender metallic circulation, the requirements of the country, including the desideratum of stability, can be met by an appropriate development of the gold exchange standard. To suggest that the only way of remedying the defects in the pre-war currency system involves the reduction of the rupee to a limited legal tender and the forcing of a gold circulation is to ignore the fundamental causes which led to the breakdown of the gold exchange standard in the course of the war.

NOTE.

The general result of the scheme for introducing a gold currency on the lines suggested by Mr. Denning appears to be as follows:—

(*Figures in crores of rupees.*)

	Gold.	Silver.	G. of I. securities.	Sterling securities.	Gross note circulation.	Gold Standard Reserve.	Real value* of aggregate assets.
Assets of Government, 30th Sept. 1925	29·7	90·1	43	26·7	189·5	53	154·5
Assets on completion of scheme	56·9	—	90	42·6	189·5	—	99·5
							Loss 55

* Valuing silver at 24*d.* per oz. and Government of India securities at nil.

The transaction has involved the exchange of Rs. 200 crores of silver for gold. It is postulated that the sale of silver has produced Rs. 100 crores gold, leaving a deficiency of Rs. 10 crores needed to meet the public's demand for gold exchange. This would reduce the Gold Standard Reserve to Rs. 43 crores, which is required to raise the gold and sterling holdings in the Currency Reserve from the initial to the ultimate amount. The balance of the loss in the reserve (Rs. 90 —43 crores) is made good by writing up the Government of India's debt to the reserve from Rs. 43 to Rs. 90 crores.

The loss shown in the table above—namely, 55 crores—which is the true capital loss, represents the 55 crores of assets which the Government of India will have sacrificed in giving the public 110 crores of gold in return for rupees, which on sale as silver will realise 55 crores only. It is claimed in the Memorandum that the new system can be safely worked with this reduced quantity of assets, that a part of the reduction of total assets can be effected by diminishing the holding of metal, and that there is no *effective* loss except in so far as the interest-yielding assets also have to be reduced. Thus Mr. Denning, as shown in the foregoing figures, puts the reduction of interest-yielding assets at about 37 crores and the resultant loss of revenue, taking interest at 3 per cent., at 112 lakhs per annum.*

The argument seems to amount to this: that a scheme of expenditure need not be regarded as costing money if the funds to meet the expenditure are readily available and are not at the moment yielding any return. There are at present some 40 crores (nominal value) of temporarily redundant rupees still held in the Paper Currency Reserve as the *remanet* of the last period of depression. To this extent the present metal holding is excessive and could safely be replaced as regards rupees 40 crores (nominal amount) by 20 crores (in real value) of interest-bearing securities obtained by selling the surplus rupees, and by substituting 20 crores more of new Book Debt. But this, if it were worth† doing at all, could also be done while retaining the present system. Thus the proper comparison to be made in regard to the interest-bearing assets under either system is one between (*a*) those now held plus an additional 20 crores and (*b*) those which would be held on a gold standard system. On the postulates of the Memorandum the difference would be 57 crores.

* It is not proposed to analyse here in detail Mr. Denning's estimate of the loss in the transitional period. Examination of the process, however, suggests that the figure will materially exceed his estimate of Rs. 165 lakhs.

† Whether it would be a paying speculation to effect the replacement is a matter of judgment and calculation. It seems likely that the loss on sale of silver now and repurchase later when further silver was again required for currency purposes would outweigh the interest gained in the meantime.

As the securities in the Gold Standard Reserve, amounting to 53 crores, at present yield an average return of about $4\frac{1}{2}$ per cent., the rate of interest for the purpose of calculating the loss entailed in sacrificing 55 crores can hardly be taken at less than 4 per cent. The annual loss may thus be put at $2\frac{1}{4}$ crores a year, of which $1\frac{1}{2}$ crores is interest now being earned and contributing to the balancing of India's budget, and the remainder would accrue as the rupees now surplus were gradually sold and replaced by investments.

This understates the potential interest loss, as rupees absorbed by the public in the ordinary course will be taken not at their bullion, but at their nominal value. The 40 crores of surplus rupees thus represent potential earning power of an additional 40 crores of sterling investments, assuming that the holding of gold remains unchanged.* When the silver holding is reduced by absorption to Rs. 50 crores, the reserves of Government would be as follows :—

(*Figures in crores of rupees.*)

Gross circulation.	Gold.	Silver.	Sterling securities.	G. of I. securities.	G.S.R. sterling securities.	Interest earning assets.
189·5	29·7	50	66·8	43	53	119·8

The interest-yielding assets amount to Rs. 119·8 crores as compared with Rs. 42·6 crores under the Gold Currency scheme, i.e. an excess of Rs. 77 crores. If interest on Rs. 53 crores is taken at 4 per cent., and on Rs. 24 crores at, say, 3 per cent., the aggregate interest loss works out at about Rs. $2\frac{3}{4}$ crores per annum.

Something must also be added for loss in respect of future profits on coinage. These accrued from 1900–15 at the average rate of $1\frac{3}{4}$ to 2 crores a year, and though a circulation of 150 crores† of rupees will itself need maintenance, the future loss from diminished profits may be taken at $\frac{1}{4}$ to $\frac{1}{2}$ crore a year. On the whole, the permanent loss to India as the result of adopting a scheme for putting (?) 50‡ crores of gold coin into circulation can scarcely fall short of 3 crores a year, besides an indefinite and incalculable amount depending on the extent to which the promotion of a gold circulation checks the future natural growth of the note issue (cf. para. 54 of Chamberlain Commission Report).

Sir B. Blackett in his final Minute (paras. 22 and 23) alludes to two possible methods of "reducing the cost," viz. (1) a silver import duty and (2) the operation of the reconstituted Paper Currency Reserve on a smaller metallic basis and therefore a larger basis of interest-yielding securities than that suggested in Mr. Denning's Memorandum. The suggestion that a new tax (and in passing, it may be noted, a very controversial tax) can reduce expenditure is rather odd. The tax will tend to obscure the true cost of the scheme, i.e. the enhanced sums received for the sale of rupee-silver in India will include an element which is properly to be regarded as import duty.

As regards Sir B. Blackett's second expedient, there is, of course, wide scope for difference of opinion on such questions as those of the total strength of a currency reserve or its distribution between coin and investments. But those who would favour a complete departure from conservative precedent in propounding a scheme for a Paper Currency Reserve for India under a gold standard might, it is thought, find equal justification or the same departure in connection with a gold exchange standard. It is difficult to maintain that a reserve, which has to support a gold currency and indirectly a still considerable rupee currency as well as the additional risk of a turn-over from notes to gold, will not be in need of very great strength and liquidity of resources. As has been previously pointed out, there is no true saving attributable to the project of a gold circulation in running the new reserve on a smaller body of resources if the same thing could be done with equal safety, or no greater risk (according to the point of view), under the present system.

There is, of course, an element of true economy in a gold currency in so far as it produces, by the return of gold coin from circulation, the gold for providing sterling credits in times of depression. The point opens up a rather wide question, but it will perhaps suffice to note here the very great probability that, with rupees circulating to three times the value of gold and being, as compared with the gold, "bad money" rather than "good money" (to use the terms of Gresham's Law), any metallic returns of the circulating medium will be predominantly in the form of rupees.

* The process may be illustrated by comparing the position of the Paper Currency Reserve on 30th September 1925 and 22nd January 1926, as below :—

(Gold and sterling securities are valued at Rs. $13\frac{1}{3}$ = £1, and all figures are in crores of rupees).

	Gross Note circulation.	Gold.	Silver.	Rupee securities.	Sterling securities.
30th Sept. 1925	189·5	29·7	90·1	43·0§	26·7
22nd Jan. 1926	190·8	29·7	82·4	40·0§	38·7

§ Balancing figure.

† About two-thirds of the present estimated rupee circulation.

‡ Out of 110 crores of gold to be issued the first 50 or more are to be in bullion form.

APPENDIX 72.

Memorandum No. 4, on "Transfer of the Note Issue to the Imperial Bank, and connected Questions," submitted by Mr. C. H. Kisch, C.B., Financial Secretary, India Office.

The following memorandum relates to the scheme for the future regulation of the paper currency on the assumption that India continues on a gold exchange standard, as set out in paras. 7–10 and 16–18 in Mr. Denning's memorandum.

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1. It may be accepted that, unless the existing Government note issue is replaced by a bank note issue, there is relatively little to be done in the way of relieving Government of its responsibilities in regard to currency control or of increasing the duties of the Imperial Bank in connection with the Indian currency system. When the Imperial Bank was established in 1921 it was not at the time within the scope of the scheme of the promoters of the amalgamation, or of the Government of India, that the Bank should become a bank of issue;* but assuming that the Commission are satisfied, from the evidence taken in India, that no untoward consequences are to be expected from the replacement of a Government note by a bank note, the way is open to a number of possibilities.

2. The following points of principle may be noted at the outset:—

(1) Apart from any considerations arising out of the exceptional conditions of India, there are decided advantages, subject to proper safeguards, in relieving the Government of India of certain direct responsibilities in respect of currency management.

(2) The Imperial Bank is not a Central Bank in the sense in which this term is ordinarily understood. The main business of the Imperial Bank is understood to be concerned with ordinary commercial banking operations throughout India, and the recent large increase in the number of its branches, which is a sequel of the amalgamation, emphasises this aspect of its business.

The question has two sides:—

(*a*) From the Government's point of view it is necessary to be satisfied that the Bank will be proof against the possibility that the discharge of its duties towards regulation of the currency may be affected by its interest as a trading organisation working for profit.

(*b*) From the point of view of other banks in India, Government must consider whether the Bank competing for business throughout the country is to be placed in such a paramount position *vis à vis* its competitors as must result from the control of the note issue in addition to the holding of the Government balances.

In this connection it is worth while to refer to the part that the Government balances play in the conduct of the Bank's business.

Statistics are included in Appendix I showing the assets and liabilities of the Imperial Bank at the end of each quarter since its constitution in January 1921 and monthly since January 1925, and percentages are included in the last three columns showing the proportion of cash to liabilities, the proportion of Government deposits to cash, and the proportion of public (i.e. Government) deposits to other deposits. The high proportion of the public deposits to other deposits during considerable periods in 1924 and 1925 should be noted. The statistics may be compared with corresponding figures for the Bank of England in Appendix II.

It will also be observed that the amount of the Government deposits has tended at times to form an exceptionally high percentage of the Bank's cash, and on numerous occasions in the course of the last 12 months the Bank's total cash has been substantially lower than the amount of the Government deposits.

The question arises whether it is practicable and expedient in the present-day Indian economy to provide for the creation of a Central Bank in the strict sense, that is a bankers' bank, entrusted with Government balances and the note issue, engaging in rediscount business, authorised to buy and sell securities or bullion, but generally not competing with other banks for ordinary business. The creation of such a Bank would presumably involve a splitting of the functions now discharged by the Imperial Bank. It is suggested that the Imperial Bank with its established position is the best, and perhaps the only possible, organ for promoting the development of banking habits throughout India. If it is to continue its pioneer work as a commercial bank, the natural course, assuming that the difficulties can be overcome, would seem to be in the direction of creating a new Reserve Bank, which would take over the central banking duties now discharged by the Imperial Bank along with any

* In referring to this question in 1921 the Government of India remarked: "When a stable policy has been evolved and currency conditions have settled down, and when the management of the Paper Currency in India will consist of a more or less routine application of authoritatively established principles, then we think that the employment of the Bank as our agent in this matter might well be favourably considered."

additional banking and currency functions now discharged by Government that may be deemed suitable for transfer to the Bank. The constitution of such a Bank would naturally have to provide for the due safeguarding of Government's interests.

The memoranda prepared by officials of the Government of India do not refer to any possible developments on the lines alluded to in the preceding observations. The remarks that follow have therefore been drawn up on the hypothesis, apparently assumed in the Indian memoranda, that the general character of the Imperial Bank will not be materially changed.

(3) Owing to the dual character which the Imperial Bank would have if, without any substantial change being made in its functions, it were entrusted with the control of the note issue, it is necessary to ensure that the Government should have an effective voice in regard to the higher financial policy of the Bank, though the management of its day to day business would continue to rest with the Bank's officers.

The adequacy of existing arrangements in regard to Government intervention (*vide* section 14 of Agreement with Bank) will no doubt be considered. The Governor-General in Council is entitled to issue instructions to the Bank in respect of any matter vitally affecting the financial policy of Government or the safety of Government balances, and the representative of the Government of India on the Board at present has a right of suspensory veto in regard to any action prejudicial to Government's interests under the above-named heads. This should, of course, continue, as should also the provision that the managing governors are to be appointed by the Governor-General in Council after consideration of the recommendations of the Central Board and should hold office for such term as Government directs. The management of the note issue might perhaps be specifically mentioned as one of the subjects in regard to which Government should be entitled to issue instructions to the Bank.

A further suggestion may be mentioned in this connection. Present indications point to an increasing association between the important Central Banks for the purpose of controlling the value of gold through their credit policy. India, as a creditor country with a large power for absorbing gold, is an important factor in the case. Liaison has already been established between the Bank of England and the Imperial Bank through the Advisory Committee in London. It might help the interests of Government if contact were established between the Secretary of State in Council and the Advisory Committee.

(4) It appears necessary that whatever arrangements are made regarding the functions of the Imperial Bank in respect of the note issue, they should not have the effect of impairing the freedom of Government to deal with its own balances as it thinks fit. There are strong objections to attempting to tie up the Secretary of State by an advance monthly programme or anything of the kind. It seems cardinal that if Government deposits funds at a bank it should in a general sense be free to deal with those deposits as it thinks fit. The action to be taken in regard to remittance of Government balances from India to England cannot be forecast with any accuracy for any length of time ahead, and if the exchange and other circumstances are favourable it must be open to the Secretary of State to require remittances to be made to London as he deems expedient. It appears impossible for the Secretary of State, who has constitutional and statutory responsibilities, to be satisfied with an obligation undertaken by a bank, however eminent, to keep him supplied with funds. The commitments which the Secretary of State has to meet in London to holders of India sterling debt and others are his commitments, and it is desirable that the Secretary of State should retain in his hands the power to arrange his finance as he thinks expedient in the light of ever-changing circumstances.* The question of the agency for the transfer of funds from or to India is of course an entirely distinct issue.

(5) There appear to be strong arguments in support of the view that the Gold Standard Reserve should be maintained as a separate fund in the hands of Government. The Secretary of State, who under the existing constitution is responsible to Parliament for the good government of India, enjoys statutory borrowing powers, which may be brought into play in the ultimate resort in the discharge of his duty as custodian of the Indian exchange. It would seem scarcely consistent with his present responsibilities that he should hand over the control of the reserve, which must be employed for the support of the exchange, to another authority. Further the policy to be pursued in regard to the remittance of Government balances from and to India, in regard to which it is suggested that the control of the Secretary of State should be beyond question, has a close bearing on the exchange and the responsibility for its maintenance.

This line of reasoning accords with the view regarding the scope of a State Bank, expressed in the annex to the Report of the Royal Commission of 1913–4 (p. 78), that "the custody of the Gold Standard Reserve and the ultimate responsibility for the maintenance of exchange must remain, in the most direct manner, with the Secretary of State."

(6) The conversion of the Government note issue into a bank note issue, and the general modelling of the Indian exchange arrangements, so far as may be, on the lines familiar in

* It is worth noting in this connection that the Secretary of State's balances in London earn interest, which in recent years has amounted to about £400,000. The existence of this important source of revenue will doubtless not be overlooked in any proposals that may be made in regard to the Home Treasury balances.

this country, must not be allowed to obscure not only the difference between the character of the Imperial Bank and the Bank of England, but the difference between London and Indian monetary conditions generally. An alteration of Bank rate in London sets in motion a number of powerful forces which influence the exchange and the level of internal prices. Owing to the organic unity of the credit system on which business is conducted in the United Kingdom, the reactions of the Bank policy are at once felt throughout the country (and abroad); but in India, where the credit system is comparatively undeveloped, and the money market is less organic, changes in the Bank rate have not the same vital force.* Presumably it is to this factor that the well-known difficulty of effecting deflation in India is ultimately to be ascribed. Occasions may arise when this problem may have to be tackled with a high degree of independence and resolution. It is suggested that the Imperial Bank will be fortified in taking the steps that may be necessary if the ultimate authority of the Government is adequately preserved.

3. For the above reasons it is proposed, in discussing the scheme for the creation of a bank note issue for India, to distinguish, so far as possible, between the Bank's responsibility for the convertibility of the note and the Government's responsibility for the maintenance of the exchange. It will now be convenient to refer to the different heads under which the scheme is set forth in para. 7 of Mr. Denning's Memorandum. On the whole, and subject to the comments that follow, the system outlined seems generally suitable and retains with appropriate changes the guiding factors which serve to secure exchange stability under the pre-war system.

(A) *Gold coin, bank notes, and silver rupees to be unlimited legal tender.*—The question of gold is referred to below.

(B) *Government to be under an obligation to give gold coin in exchange for gold bullion on payment of a seigniorage to cover minting charges.*—Presumably this does not mean that Government must maintain a stock of coined gold, but merely that it will undertake to convert bullion presented into coin. Such bullion if presented by the Imperial Bank would presumably remain part of the Paper Currency Reserve during the process of coinage.

(C) *The Imperial Bank to be under an obligation to buy gold at a fixed price.*—This reproduces the obligation formerly devolving on Government to give local currency in exchange for sovereigns, the development being that local currency will be given in exchange for bullion to be coined as required under (B).† The amount of gold going to India would presumably be carefully controlled by means of the standing offer, made with the approval of Government, to sell rupees at a sterling price corresponding with the upper gold point.

(D) *Bank notes to be payable on demand in rupees or gold coin at the option of the Bank, subject to the right of holders of notes of the denomination of Rs. 10,000 to demand payment in foreign exchange at a price corresponding to lower gold point.*—The object of this provision appears to be to give the Bank an incentive to maintain the exchange value of the rupee, but there is something artificial in making a differentiation between one category of note and others, and it is suggested that the necessary incentive to the Bank might be more appropriately given in another way, which would emphasise the fact that the ultimate responsibility for the exchange value of the rupee rests with Government, while the convertibility of the note is the responsibility of the Imperial Bank. The object to be aimed at is to secure that, as at present, the sterling (and if necessary the gold) in the Paper Currency Reserve should be used for contraction of the circulation and thus indirectly for the support of the rupee, and that these resources, if thought desirable, should be drawn upon before recourse is had to the Gold Standard Reserve. It would seem that this aim would be achieved if the Imperial Bank were placed under an obligation to sell to the Government of India, if they should so require, against payment in India, gold at par or sterling at lower gold point up to the limit of such resources in the Currency Note Reserve.‡

(E) *The Bank to be under an obligation to give silver rupees or notes on demand in exchange for gold coin.*—This is understood to mean that the option is with the Bank.

* Compare Mr. J. M. Keynes, Indian Currency and Finance, 1913:—"The Presidency Banks publish an official minimum rate of discount in the same manner as the Bank of England. As an affecting influence on the money market, the Presidency Bank rates do not stand, and do not pretend to stand, in a situation comparable in any respect with the Bank of England's. They do not attempt to control the market and to dictate what the rate ought to be; they rather follow the market, and supply an index to the general position."

† Prior to December 1906 the Government had been prepared to receive gold bullion in exchange for rupees.

‡ The proposal would operate as follows:—Exchange, it may be assumed, reaches lower gold point. The Government require the Bank to place, say, £1,000,000 sterling held in the Paper Currency Reserve at the credit of the Home Treasury in London against a debit of Rs $1\frac{1}{3}$ crores to the Government account in India. The Bank then withdraws from its cash balance Rs. $1\frac{1}{3}$ crores notes which are cancelled, thus effecting the appropriate currency contraction. The sterling would be sold, if exchange remained at gold export point, by the Imperial Bank, as the agents of Government, to remitters, or would be available for meeting the Home Charges.

It appears unnecessary to contemplate the issue of drafts by the Imperial Bank payable in countries outside Great Britain, as the United Kingdom may now be presumed to be on a gold standard, and Indian trade is normally financed through London.

(F) The proposals Mr. Denning makes for the constitution of the Paper Currency Reserve are coloured by the idea of stimulating the use of gold in India. But the holding of unnecessary gold is costly, and surrenders a large part of the advantage that India is in a position to derive from the close association of her currency and finance with sterling now that the British £ is again on a gold basis. This question is referred to further in para. 4.

(G) The Gold Standard Reserve stands at Rs. 53 crores, which would seem to be adequate for any reasonable emergency, as together with the sterling securities in the Paper Currency Reserve there would be available, assuming nothing abnormal occurs before stabilisation is introduced, Rs. 80 crores or more for the purpose of contracting the circulation and influencing the exchange.

The size of the reserves must presumably be based on the view taken of the possible contraction of currency (with, of course, an ample margin) that might be required for regulating the monetary supplies of the country so as to bring the internal price level into accord with those of other gold standard countries. The figures given in para. 9 of Memorandum I regarding currency expansion suggest that a normal average of something under Rs. 25 crores a year might be taken to represent the annual demand for fresh currency. The sterling securities, therefore, appear adequate, altogether apart from the gold, to draw off three years' average absorption. Light is also shed on the problem by the figures of the deposits in India of the Imperial Bank, Exchange Banks, and larger Indian Joint Stock Banks, which in recent years were as shown in the following table :—

Deposits in Banks in India.

Year.	Imperial Bank of India.	Principal Indian Joint Stock Banks.	Exchange Banks.	Total.
	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.
31 Dec. 1919	75·94	58·99	74·36	209·29
„ 1920	87·05	71·15	74·81	233·01
„ 1921	72·58	76·90	75·20	224·68
„ 1922	71·16	61·64	73·38	206·18
„ 1923	82·76	44·43	68·44	195·63

It is suggested that a far smaller deflationary influence than is represented by the sale of anything like Rs. 80 crores of reverses, would suffice, in any circumstances that can reasonably be foreseen, to readjust Indian currency and credit for the purpose of maintaining the parity of the internal price level with gold prices outside. Indeed it may be asked whether the contraction, which the present reserves admit, could be effected without jeopardising the stability of the Indian money market as a whole.* It will, in any case, be some years before coinage of silver is again undertaken, and if things go well in the next few years, the sterling assets of the Currency Note Reserve may be expected to grow, in which case it would probably be safe to use the coinage profits either in whole or part for the reduction or avoidance of sterling debt, a measure which conserves borrowing power and indirectly acts in support of the exchange.†

(H) The proposed arrangements for the supply of silver seem suitable, subject to the policy pursued at any particular time having the approval of the Government's representative on the Board of the Bank. It is assumed that time would be allowed for coinage before the Bank demands rupees in exchange for the bullion.

(I) The view has already been urged that the control of remittances should continue in the hands of Government, and the question as to the method of effecting the remittances is separately discussed in Memorandum No. 5.

4. It is now convenient to consider the reconstitution of the reserve on the assumption that the rupee will be stabilised at 1s 6*d*., and on the basis of the figures of 30th September 1925, used in the Indian memoranda. The Paper Currency and Gold Standard Reserve stood at that time as follows :—

(*Figures in crores of rupees.*)

Gross circulation.	Gold.	Silver.	G. of I. securities.	Sterling securities.	Gold Standard Reserve.
189·5	29·7	90·1	43·0	26·7	53
	Percentage of gross circulation.				
	15·6	47·6	22·7	14·1	

This table assumes that the gain on revaluation of the gold and sterling assets in the Paper Currency Reserve will be applied to strengthening the weakest link, that is, the

* An interesting light on the deflation problem in India is suggested by the figures of deposits in India in 1919 and 1920. The year 1920 was the year in which the Government were seeking to contract the currency, as far as possible, by sales of reverses aggregating £55 millions. Yet the Bank deposits actually increased.

† *Cf.* Sir H. Howard, p. 30, App. I, Vol. III, Appendices to Report of Babington Smith Committee. "Possibly after a figure of £40 millions has been reached, half of any subsequent accretions could profitably be diverted to capital expenditure; while when a £50 millions figure is attained, it would in my view be safe to utilise for capital expenditure all the receipts, which would otherwise accrue to the Reserve."

Government of India securities, a natural operation which goes towards undoing the writing-up of those securities when the reserve was valued on a 2*s*. basis in 1920.

There cannot be a question but that the reserve is of great strength. The metallic ratio exceeds 60 per cent. The sterling and gold form approximately 30 per cent. If the silver is valued on the basis of 30*d*. per oz. (standard), the real assets in the reserve represent nearly 60 per cent. of the gross circulation. The silver holding is higher than is necessary, and it is worth considering whether steps should be taken to reduce it somewhat by gradual sales, the proceeds being converted into sterling securities. In such a case the natural course would be to finance the transaction from the Gold Standard Reserve to which the coinage profits were credited. But the strength of the Currency Reserve is such that as a new start is in contemplation it would be permissible to finance the loss by increasing the Government of India's debt to the reserve. Obviously the proportions in which these two resources might be invoked offer room for different opinions.

Ultimately, no doubt, as rupee absorption continues, silver would have to be repurchased, and the question as to whether some sales of silver would be expedient depends in the main on the financial results to be anticipated. These, it will be seen from the calculations in Appendix III, turn largely on the difference between the selling and buying price of silver. It is, in a sense, a speculation in silver. On the whole, it may be doubted whether there is sufficient advantage, assuming that the rupee remains unlimited legal tender, in reducing the Government's holding by sales, and whether it will not be preferable to allow the present surplus to be reduced automatically by natural absorption.

As regards gold, it is evident that so long as sterling and gold are synonymous, a gold exchange standard could be worked with a greater or lesser amount of gold, or even with no gold at all as suggested in Sir Basil Blackett's scheme for a sterling exchange standard. If India is to continue to hold some gold despite the cost, it must presumably be on the understanding that the gold is for use either for export in support of exchange or for issue as currency in the event of any unexpected crisis. By holding a certain amount of gold India *pro tanto* protects herself against a possible depreciation of sterling, and incidentally the holding of some gold would enable India in an emergency to give some support to sterling, in the stability of which she would have a tremendous interest by reason of her large investments in sterling and the important part that sterling plays in the trade of the country. Further, apart from any question of sentiment, to which due importance must be attached, the holding of gold by Banks of Issue is sanctioned by established practice, and has long been customary in the case of India. If, for these or other reasons, it is considered desirable that India should continue to hold gold in the Paper Currency Reserve, different opinions may legitimately exist regarding the amount that should be so held. It is, however, suggested that the amount should be carefully regulated and that, except for the purpose of maintaining the statutory metallic ratio, India should not in present circumstances aim at holding more than Rs. 30 crores of gold, and that interest-bearing sterling securities should be regarded as the main backing of an expanded issue. If gold is to be available for issue as local currency it will be convenient that there should be minting facilities in India. The Babington-Smith Committee preferred the sovereign to a specific Indian coin, but a new factor would be introduced if exchange were stabilised at 1*s*. 6*d*., as at this figure the sovereign would not be equivalent to an integral number of rupees. On the whole practical considerations seem to indicate a specific Indian gold coin.

In the light of the above observations a possible scheme for the reserve might then be established on the following lines :—

(1) The minimum metallic percentage to be ordinarily 40 per cent. of the gross circulation, and the fiduciary issue to be ordinarily limited to 60 per cent., the Bank to have the power to increase the invested proportion of the reserve to 70 per cent. on payment of a tax which would vary with reference to the degree of excess, e.g. 6 per cent. if the metallic ratio is less than 40 per cent. but more than 35 per cent., 7 per cent. if the metallic ratio is less than 35 per cent. but more than 32½ per cent., 8 per cent. if less than 32½ per cent. but more than 30 per cent.

(2) Of the metallic holding Rs. 50 crores to be fixed as the normal maximum of silver rupees. It would be necessary to allow the silver holding to exceed this figure until the present surplus had been absorbed. I agree with Sir B. Blackett that there is no need to prescribe a minimum for the silver holding, but it seems a question whether it would not be desirable to give the Bank a small share in the profits of the note issue in order that they might have some interest in avoiding an excessive holding of metal—possibly by allowing a small percentage of the yield on the sterling investments beyond the initial figure.

The metallic reserves would normally be located in India subject to a reasonable margin of time for shipments.

(3) Of the securities in the reserve the rupee securities not to exceed one-third of the gross circulation, the Government of India securities to be limited to Rs. 43 crores.

The object of this provision is to offer scope for the inclusion of an increasing quantity of suitable internal bills of exchange of short maturity if the rediscount market develops.

The remainder of the securities to be short-term British or Colonial Government securities expressed in sterling.

Assuming that the gold holding is rounded up to Rs. 30 crores and that silver absorption proceeds, the reserve might eventually be expected to assume the following complexion, which allows for the replacement of silver by sterling securities :—

(Figures in crores of rupees.)

Gold circulation.	Gold.	Silver.	G. of I. securities.	Sterling securities.	Gold Standard Reserve.
189·5	30	50	43	66·5	53
	Percentage of gross circulation.				
	15·8	26·4	22·7	35·1	

This hypothetical change in the composition of the reserve would lead to an increase of about Rs 40 crores in the earning assets, representing an annual interest gain of about Rs. 1¼ crores.

5. The question of the restrictions to be placed on the exchange operations of the Imperial Bank of India is discussed in Mr. Denning's Memorandum on the assumption that, subject to proper safeguards, it is appropriate to entrust what is primarily a commercial bank with the wide public responsibilities involved in the transfer of the note issue without making any material change in the character of the business it may undertake. It is obvious that the control of the note issue involves the grant of permission to the authority controlling it to transfer funds freely between India and London, and there seems no reason in that case for restricting the operations to one centre. From this point of view the words "in India" in (*a*) of the conditions set out in para. 17 of Mr. Denning's Memorandum seem unnecessary.

6. The question as to the method by which the Government should continue to obtain the profits of the note issue, in the event of transfer to the Imperial Bank, is a matter of detail which is capable of solution along different lines. There will be practical difficulties in fixing a fair percentage to be paid by the Bank for a period of five years on the invested portion of the reserve above the fixed minimum which would be free in order to cover the cost of administration. Owing to the variable character of rates of discount, any figure adopted for five years would almost certainly be to the detriment of one party or the other, and involve claims and counterclaims. The suggestion is offered that if the matter is dealt with on these lines the percentage rate for each year might be based on the actual rate of the previous year, and on the amount of securities held during that year. This leaves over for settlement the question of the first year, which could easily be adjusted *ex post facto* in the light of experience.

7. Reference may here be made to certain banking duties performed for the Secretary of State by the Bank of England.

Under clause 23 (2) of the Government of India Act, such parts of the revenues of India as are remitted to the United Kingdom, and all money accruing in the United Kingdom for the purpose of the Government of India, has to be paid into an account at the Bank of England.

Under various East India Loans Acts it is provided that the registers of the loans should be kept either at the office of the Secretary of State or at the Bank of England. These registers are now kept at the Bank of England.

The custody of securities held by the Secretary of State is in the hands of the Bank of England. The Secretary of State has entered into agreements with the Bank of England—(*a*) in respect of his balance and the printing of currency notes, the agreement not expiring until 1929; and (*b*) in respect of the management of the India sterling debt, the agreement not expiring until 1930. The printing of notes will be transferred to India on the expiry of the agreement. The relations between the Secretary of State and the Bank of England are intimate and cordial, and the Bank is in a position to render, and has continuously rendered, inestimable services to Indian finance—services which only a bank of the standing and authority of the Bank of England could render.

APPENDIX I.

The Imperial Bank of India.

Date.	LIABILITIES.						ASSETS.						Per-centage of cash to liabilities.	Percentage of public (Government) deposits to cash	Per-centage of public deposits to other deposits.
	Paid-up capital and reserve.	Public deposits.	Other deposits.	Loans against Hundis	Miscel-laneous.	Total.	Securities and loans.	Cash credits.	Bills dis-counted and purchased.	Miscel-laneous.	Cash.	Total.			
	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Rs. lakhs.	Per cent.	Per cent.	Per cent.
1921.															
28th January -	7,20·00	7,96·50	76,43·40	—	26·80	91,86·70	35,22·24	19,45·66	7,54·95	2,59·00	27,04·85	91,86·70	31·94	29·5	10·4
1st April - -	8,33·61	5,36·77	74,03·48	—	51·26	88,25·12	29,65·98	22,09·64	9,77·30	2,57·76	24,14·44	88,25·12	30·21	22·2	7·3
1st July - -	9,18·85	20,15·48	70,83·95	—	1,82·32	1,02,00·60	29,61·35	22,03·14	12,87 52	2,79·05	34,69·54	1,02,00·60	37·38	58·0	28·4
30th September -	9,42·08	8,49·51	83,75·19	—	1,44·73	1,03,11·51	39,56 84	23,17·59	8,03·33	2,63·04	29.70·71	1,03,11·51	31·70	18·6	10·1
30th December -	9,54·03	6,79·99	64,90·62	—	2,29·36	83,54·00	31,12·18	25,25·83	10,30·39	3,29·76	13,55·84	83,54·00	18·32	50·1	10·5
1922.															
31st March -	9,64·07	20,07·79	57,08·44	2,00·00	1,21·90	90,02·20	28,43·23	29,13·51	9,02·42	2,95·44	20,47·60	90,02·20	25·47	98·0	35·2
30th June - -	9,64·18	16,69·94	62,96·84	—	2,21·41	91,52·37	23,21·00	26,23·93	4,69·26	3,45·73	33,91·85	91,52·37	41·42	49·3	26·5
29th September -	9,74·24	13,36·10	73,18·93	—	2,27·42	98,56·69	27,97·54	26,71·92	4,22·10	2,92·35	36,72·78	98,56·69	41·34	36·4	18·3
29th December -	9,74·39	14,01·93	55,89·42	—	2,34·66	82,00·40	28,92·95	28,77·45	5,50·22	3,31·93	15,47·85	82,00·40	21·42	90·5	25·1
1923.															
30th March -	9,85·00	20,53·17	53,61·86	—	1,92·23	85,92·26	28,28·22	31,30·33	8.86·03	3,03·47	14,44·21	85,92·26	18·98	142·2	38·3
29th June - -	9,85·00	12.37·77	68,28·08	—	1,91·67	92,42·52	24,85·98	29,64·02	5,41·27	4,10·89	28,40·36	92,42·52	34·39	43·6	18·1
28th September -	9,97·50	15,69·05	78,89·28	—	1,08·41	1,05,64·24	27.85·10	30,55·23	4,70·62	3,13·61	39,39·63	1,05,64·24	41·18	39·8	19·9
28th December -	9,97·50	8,13·80	72,35·51	8,00·00	1,89·47	1,00,36·28	33,08·84	35,86·01	10,33·25	4,03·69	17,04·49	1,00,36·28	18·85	47·7	11·2
1924.															
28th March -	10,07·50	26,02·45	71,20·50	12,00·00	1,10·28	1,20,40·73	39,02·12	43,07·24	15,39·48	4,71·60	18,02·29	1,20,40·73	16·49	143·0	36 5
27th June - -	10,07·50	21,43·12	74,13·57	—	2,31·95	1,07,96·14	33,04·92	41,93·61	6,00·62	5,42·86	21,54·13	1,07 96·14	22·00	99·6	28·9
26th September -	10,20·00	24,23·21	73,58·44	—	1,07·57	1,09,09·22	32,91·32	37,66·85	5,78·06	4,43·13	28,29·86	1,09,09·22	28·61	85·6	32·9
26th December -	10,20·00	9,77·95	72,29·16	2,00·00	2,01·51	96,28·62	32,09·46	31,55·73	10,45·90	4,35·73	17,81·80	96,28·62	20 69	54·9	13·5
1925.															
30th January -	10,30·00	17,69·75	69,72·59	4,00·00	69·28	1,02,41·62	32,79·48	32,09·34	15,71·19	3,49·17	18,32·44	1,02,41·62	19·89	96·6	25·4
27th February -	10,30·00	23,31·04	68,27·41	8,00·00	90·07	1,10,78·52	34,92·80	35,80·22	19,18·29	3,49·22	17,37·99	1,10,78·52	17·29	134·0	34·1
27th March -	10,30·00	26,14·46	69,51·70	8,00·00	1,17·39	1,15,13·55	38,00·45	34,99·22	18,67·33	4,12·86	19,33·69	1,15,13·55	18·44	135·0	37·6
1st May - -	10,30·00	26,30·44	68,69·96	6,00·00	1,73·51	1,13,03·91	40,16·81	37,59·11	12,47·05	3 69·40	19,11·54	1,13,03·91	18·60	137·5	38·3
25th May - -	10,30·00	28,96·31	68,74·41	—	1,98·31	1,09,99·03	38.08·67	36,35·98	9,92·78	2,97·31	21,64·29	1,09,99·03	21·71	133·8	42·1
26th June - -	10,30·00	22,45·76	73,77·94	—	2,16·30	1,08,70·00	33,46·92	30,51·66	6,50·31	4,22·93	33,98·18	1,08,70·00	34·53	66·1	30·5
31st July - -	10,40·00	24,80·61	75,75·72	—	78·82	1,11,75·15	29.06·80	27,49·27	4,87·22	3,46·08	46,85·78	1,11,75·15	46·23	53·0	32·8
28th August -	10,40·00	20,91·66	75,33·09	—	87·18	1,07,51·93	28,90·57	27,86·92	4,48·63	3,53·01	42,72·80	1.07,51·93	43 99	49·0	27·8
2nd October -	10,40·00	8,38·29	79,02·13	—	1,07·89	98,88·31	29,95·74	29,14·33	4,18·38	3,69·47	31,90·39	98,88·31	36·05	26·3	10·6
30th October -	10,40·00	8,10·94	74,47·66	—	1,36·11	94,34·71	30,54·91	29,54·90	5,64·60	3,63·80	24,96·50	94,34·71	29·73	32·5	10 9
27th November -	10,40·00	8,11·11	74,18·02	—	1,55·23	94,24·36	31,14·96	31,96·49	5,62·29	3,90·71	21,59·91	94,24·36	25·76	37·5	10·9
25th December -	10,40·00	5,37·76	73,45·54	—	1,97·85	91,21·15	31,41·44	34,34·41	4,56·93	4,06·41	16,81·96	91,21·15	20·81	32·0	7·3

Appendix II.

Bank of England.

Date.	Public deposits.	Other deposits.	Cash (notes and coin).	Percentage of cash to liabilities.	Percentage of public deposits to cash.	Percentage of public deposits to other deposits.
1920.	£ (millions)	£ (millions)	£ (millions)	Per cent.	Per cent.	Per cent.
15th December -	19·4	126·1	14·0	9·6	138·3	15·4
1921.						
16th March - -	18·9	107·2	18·6	14·8	101·3	17·6
15th June - -	15·9	131·1	19·3	13·1	82·2	12·1
14th September -	15·1	129·5	21·6	14·9	69·5	11·6
14th December -	13·8	140·9	22·1	14·3	62·6	9·1
1922.						
15th March - -	18·9	115·6	25·5	18·9	74·3	16·4
14th June - -	17·7	110·1	25·4	19·8	69·9	16·1
13th September -	10·4	113·4	23·8	19·2	43·7	9·2
13th December -	10·1	114·8	22·7	18·2	44·5	8·8
1923.						
14th March - -	15·6	109·5	24·3	19·3	64·4	14·3
13th June - -	11·0	108·8	23·2	19·3	47·4	10·1
12th September -	15·7	106·5	23·3	19·0	67·6	14·8
12th December -	11·6	116·9	21·5	16·7	53·9	9·9
1924.						
12th March - -	19·3	105·6	22·8	18·2	84·5	18·3
11th June - -	10·7	122·3	21·8	16·4	49·2	8·8
17th September -	10·4	111·7	24·0	19·7	41·3	9·3
17th December -	10·6	108·8	22·8	19·0	46·4	9·7
1925.						
14th January -	11·7	117·9	22·2	17·1	52·6	9·9
11th February -	9·6	115·1	23·5	18·8	40·8	8·3
11th March - -	13·7	110·5	24·2	19·4	56·7	12·4
15th April - -	14·8	110·3	27·1	21·6	54·5	13·4
13th May - -	17·4	102·2	25·8	21·5	67·6	17·1
17th June - -	13·4	109·6	31·4	25·5	42·6	12·2
15th July - -	12·6	115·2	38·2	29·9	33·0	10·9
12th August -	15·7	110·7	38·8	30·6	40·6	14·2
16th September -	17·4	111·0	37·3	29·0	46·7	15·7
14th October -	8·5	103·4	32·5	29·0	26·0	8·2
18th November -	15·1	106·6	26·2	21·5	57·6	14·2
16th December -	10·7	118·3	20·4	15·9	52·5	9·0

Appendix III.*

(*a*) Hypothetical result of selling Rs. 15 crores silver until repurchase of same amount is necessitated in order to keep silver reserve up to Rs. 50 crores, normal absorption being taken at Rs. 7 crores per annum. It will be seen that in the sixth year there is a loss of £927,000, against which interest receipts amount to £631,000. The sale price of silver is taken at 30*d*. per standard ounce and purchase price at 34*d*. per standard ounce.

Period.	Stock at beginning of year.	Absorption.	Sales at 30*d*. per standard ounce.		Purchases at 34*d*. per standard ounce.		Stock at end of year.	Net proceeds (sales—purchases).	Year's interest on net proceeds at 3 per cent.
			Amount	Proceeds.	Amount	Cost.			
	Rs. crores.	Rs crores.	Rs. crores.	£ millions	Rs. crores.	£ millions	Rs. crores.	£ millions.	£ millions.
1st year	90	7	5	2·323	—	—	78	2·323	·070
2nd year	78	7	5	2·323	—	—	66	4·646	·139
3rd year	66	7	5	2·323	—	—	54	6·969	·209
4th year	54	7	—	—	3	1·579	50	5·390	·162
5th year	50	7	—	—	7	3·685	50	1·705	·051
6th year	50	7	—	—	5	2·632	48	— ·*927*	—
									·631

(*b*) By taking the sale price of silver at 28*d*. and purchase price at 34*d*., a loss in the sixth year is shown of £1·395 millions against interest receipts of £575,000.

			Sales at 28*d*.						
1st year	90	7	5	2·167	—	—	78	2·167	·065
2nd year	78	7	5	2 167	—	—	66	4·334	·130
3rd year	66	7	5	2·167	—	—	54	6·501	·195
4th year	54	7	—	—	3	1·579	50	4·922	·148
5th year	50	7	—	—	7	3·685	50	1·237	·037
6th year	50	7	—	—	5	2·632	48	—*1·395*	—
									·575

One rupee contains $\frac{55}{148}$ standard ounces of silver:—

(i) Value at 28*d*. per standard ounce = £0·04335.
(ii) " 30*d*. " " = £0·04645.
(iii) " 34*d*. " " = £0·05264.

If it is assumed that Rs. 15 crores of silver were sold in the course of a few years at an average price of about 29*d*. per standard ounce, the amount realised would be approximately Rs. 9 crores, leaving a deficiency of about Rs. 6 crores which might be made good by increasing the Government of India's securities in the reserves to Rs. 46 crores and by drawing on the Gold Standard Reserve for Rs. 3 crores.

The result of such an operation on the reserves is shown in the following figures:—

(*Figures in crores of rupees.*)

Gross circulation.	Gold.	Silver.	G. of I. securities.	Sterling securities.	Gold Standard Reserve.
189·5	30	75·1	46	38·4	50
	(*Percentage of gross circulation.*)				
	15·8	39·6	24·3	20·3	

While, however, silver bullion was being sold, the absorption of silver currency may be presumed to be continuing independently, and for purpose of illustration it may be postulated that its place has been taken by sterling securities. In this case the reserve would present the following aspect:—

(*Figures in crores of rupees.*)

Gross circulation.	Gold.	Silver.	G. of I. securities.	Sterling securities.	Gold Standa Reserve.
189·5	30	50	46	63·5	50
	(*Percentage of gross circulation.*)				
	15·8	26·4	24·3	33·5	

The real assets are Rs. 6 crores lower than in the final table of para. 4, as there is no question in this case of a loss on the disposal of silver.

* *See also* Appendix 75 (B).

APPENDIX 73.

Memorandum No. 5, on "Remittances," submitted by Mr. C. H. Kisch, C.B., Financial Secretary, India Office.

The method of effecting the remittance from India of funds required for the purpose of meeting the needs of the Home Treasury raises a number of points which merit attention. The Appendix to this Note sets forth the position as it has developed in recent years.

2. The system of buying sterling in India, introduced in 1923 to supplement the sales of Council drafts, which had necessarily to be sold under different conditions from those prevailing before the war (*vide* Appendix), was adopted with reference to special conditions when the rupee was linked neither to gold nor sterling at a fixed rate and was a currency with a widely fluctuating international value. On the re-establishment of an effective gold parity the range of fluctuation will be limited between upper and lower gold points, and so far as the question of an undesirable up-rush of exchange is concerned (which was the origin of the introduction of purchases of sterling in India) it will be an essential element in the exchange system that tenderers of gold should be in a position to obtain rupees without limit at the new parity, and/or that rupees should be available against payment in sterling at a price corresponding with the upper gold point.

3. It is suggested that a satisfactory scheme for Government remittances must satisfy the following tests:—

(*a*) It should be so framed as to give Government the prospect of obtaining the best price for the rupees sold, consonant with market conditions.

(*b*) It should comply with the legitimate interests of those engaged in financing Indian trade.

(*c*) It should be so framed as to prevent as far as possible the financial transactions of Government from becoming a subject of controversy.

4. In considering the systems of Council sales and purchases of sterling as hitherto effected, it is important to determine the following two issues:—

(1) Are public interests better served by a system of open competitive tender or by operations of which the intended extent is not announced in advance?

(2) Are public interests best served by operations in London or in India, or in both?

5. In so far as Government has to remit funds for its own purposes, it is in the position of any private remitter, and if this were a complete description of their position there would seem to be no reason why Government should regard itself as being under any restrictions in regard to its remittances, either as to place or manner which do not apply to the ordinary trader.

6. The object of a system of public tender is to safeguard the interests of Government by securing the freest competition for the rupees on offer, and there does not seem to be any convincing reason for thinking that private discretionary operations, of which the intended extent is not announced in advance, would, over a prolonged period, produce any better result as regards the rate at which rupees are sold. It is reasonable to suppose that the sale of rupees on the scale necessitated by the needs of the Home Treasury must, in the long run, have a similar effect on the market whether these sales are conducted publicly or privately, and in so far as publicity tends to reduce the speculative element, sales by public auction should make for stability in the exchange.

7. In considering this question of public and private operations, the observations in para. 5 have a special relevance. The position of Government is not that of an ordinary remitter owing to the fact that the volume of its transactions give it a preponderating part in the determination of exchange tendencies at any particular moment. The proportion between the volume of the Government of India's exchange operations and the aggregate of transactions in the rupee-sterling exchange is probably a unique feature in the relation of any important Government to the exchange market in its currency. These considerations give those engaged in Indian trade a claim to know the action that Government is taking in regard to exchange operations much in the same way as the business community in the United Kingdom are given immediate information regarding movements of gold to and from the Bank of England.

Though on the whole the system of purchases of sterling appears to have worked smoothly so far as trade interests are concerned, there have not been lacking signs that the absence of publicity is regarded as a defect.* In this connection reference may be made

* Cf. remarks by Mr. V. A. Graham at meeting of Associated Chambers of Commerce, Calcutta, reported in *Statesman* of 16th December 1925.

to the following report of some remarks made by the Chairman of the Eastern Bank at the annual general meeting of the Bank on 20th March 1925:—

> "Referring to the question of exchange, it is necessary to mention a new factor which had presented itself in connection with the recent operations of the Indian Government. Formerly, Council drafts were sold on this side, and the amount to be offered was strictly limited. Of late, however, as a result of pressure in India, the Government had purchased sterling on the other side as well. There would be no serious objection to that provided the Government publicly announced beforehand the amount to be purchased during a fixed period. No such announcement, however, was made; the Government came into the market from time to time, sometimes even from day to day, and then suddenly withdrew entirely, thus causing the greatest uncertainty as to their future course of action. He had the greatest respect for Sir Basil Blackett, who so ably administered and controlled the public finances of India, and he was quite satisfied that the practice initiated by him, with the full support of many distinguished Indians, was designed, in the view of Sir Basil, to achieve the best ultimate result for India. He would point out, however, that when exchange operations attained a magnitude so greatly in excess of the actual requirements of the Government, so far as one was able to judge, there was an element of danger to commercial transactions exposed in such circumstances to factors outside the knowledge of the exchange banks, who could gauge the requirements of trade and commerce, but were quite unable to foreshadow the action of the Government in the exchange market. He hoped that the Government would consider the advisability of adopting for their purchases in India a procedure similar to that followed in connection with the sale of Council bills on this side."

Again, the financial correspondent of the *Times of India* makes the following remarks in the issue of 23rd May 1925:—

> "The opinion prevails in banking circles that Government should announce every morning the purchases of sterling made the previous day and that movement of public funds should not be kept private. It is contended that the sales of Council bills are made immediately public, and that the same procedure should be followed in the case of purchases of sterling, the rate and amount of purchase being made public the day following the purchase."

8. Sales of rupees by open competitive tender place all parties in the same position and are a safeguard to Government against any possible question in regard to their extensive and predominating exchange operations. On the other hand, to operate in a more or less private manner may, on occasion, invite comment and endanger the full confidence that is a vital asset to Government in its financial transactions.

9. Experience has shown that sterling remittances can be effected at satisfactory rates on an extensive scale either in India or in London. If the view is held that it is desirable that remittance operations should be conducted by open tender, with the publicity characteristic of the sales of Council drafts, the question of the seat of operations has to be considered. Two points may be noted: (1) Sales in India* involve the correlation of demands from various centres remote from each other and the headquarters of Government. This cannot be as simple or expeditious as the receipt and disposal in London of tenders from the head offices of the Exchange Banks and other leading institutions and firms generally situated in close proximity to the Bank of England. Further, in the case of Council sales in London, rupees are not issued until the Secretary of State in Council has been paid in sterling. In the case of purchases of sterling in India, the rupees are credited before the sterling has been paid over to Government. It is therefore necessary to discriminate in such purchases, and the area of competition is thus not so wide as in London, where drafts are open to tender by all without distinction.

10. Reference may here be made to the measures required when exchange weakens to the lower gold point—a matter on which some further observations are offered in para. 4 of the note on the future control of the Paper Currency. The Royal Commission of 1913–4 advised that the Government of India should make a public notification of their intention to sell bills in India on London at a price corresponding to the lower gold point, whenever they were asked to do so, to the full extent of their resources. This view was endorsed by the Babington-Smith Committee, who also approved the practice of offering telegraphic remittances, as was first done in connection with certain sales at the outbreak of the war. The Committee recommended (para. 62 of Report) that the Government of India should be authorised to announce, without previous reference to the Secretary of State on each occasion, their readiness to sell weekly a stated amount of Reverse Councils (including telegraphic transfers) during periods of exchange weakness, the rate being based on the cost of shipping

* It is worth mentioning that sales of sterling by the Exchange Banks in India, as hitherto conducted, are understood normally, or at any rate on occasions, to involve the payment of a commission by the seller to a broker. This does not arise in the case of sales of rupees through the medium of Council drafts.

gold from India to London. In the announcement issued by the Government of India on 2nd February 1920 (see page 11 of Memorandum 1), effect was given to this proposal in the following terms:—"In accordance with the Committee's recommendations, the Government of India will, when occasion requires, offer for sale stated weekly amounts of sterling reverse drafts on the Secretary of State for India (including immediate telegraph transfers)." It is desirable that the present Royal Commission should consider whether the decision embodied in the above quotation sufficiently ensures that the exchange value of the rupee will be maintained at the appropriate level. The proper working of the gold exchange standard, as developed in India, implies that rupees will be obtainable at a price corresponding to the upper gold point without limit. A complementary condition for the perfect working of the system implies that remitters should be able to obtain gold or sterling exchange at a price corresponding with lower gold point, also without limit. Hitherto Government have not taken upon themselves this last responsibility, and so long as the offers of sterling (or gold) at any time are limited the restriction on the amount may result in the market rate of exchange falling below the correct parity. An opportunity for reconsidering this question is presented by the improved prospects of economic stability in conjunction with the present strength of the gold and sterling reserves, of which the amount on 31st December 1925 was as follows:—

	£
(a) Sterling securities in the Paper Currency Reserve (nominal value) -	29,285,000
(b) Sterling securities (market value) and cash in the Gold Standard Reserve -	40,000,000
(c) Gold in Paper Currency Reserve in India - - - - - -	22,318,000
Total - - -	£91,603,000

The amount under (a) consists entirely of British Treasury Bills. Present-day policy aims at maintaining the Gold Standard Reserve in a high stage of liquidity, and of the amount under (b) £9,045,000 represents British Government securities with maturity not exceeding in any case three months, whereas the balance of the reserve is in the form of securities with ready marketability. It would mark a definite advance on the pre-war position if the Commission see their way to advising that the time has come for Government to announce its readiness to sell reverse drafts without limit at the price corresponding to gold export point. In such a case the arguments for holding the reserve in a highly liquid form would derive increased cogency.

Appendix.

Recent developments in the system of Government Remittances.

Before the war the main method by which the Secretary of State was placed in funds was by sale by open tender of Council drafts* (that is, drafts on India) at the Bank of England. Subject to modifications necessitated by war conditions, as described in the Babington-Smith Committee's Report, the same system was maintained during the war. Remittances were occasionally effected by the shipment of gold from India, but the amount of such shipments was small, and one of the objects that the Secretary of State kept before him in regulating his drawings was to avoid the necessity and expense of gold shipments.

The history of the sale of Council drafts will be found in Appendix VII to the Report of the Royal Commission of 1913–14, and a copy of the regulations of 1915 (containing the pre-war conditions) and of 1924 (the latest form) are reprinted as Annexure A to this note.

The rules now in force differ in two important respects from those in force before the War. First, they do not provide for the sale of intermediate drafts which were habitually sold, if required by trade, between the regular weekly auctions. Intermediate drafts were suspended in December 1916, and no question of their revival could arise until the resumption of the sale of Council drafts in January 1923. (Since the resumption the place of intermediates has been taken by purchases of sterling in India as explained below). Secondly, there is no provision for the sale of rupees without limit at a price corresponding to upper gold point, owing to the abnormal exchange conditions under which sales have been recently conducted.

During the period of stable exchange, the system under which Council drafts were sold in London satisfactorily met the needs of Government and trade, and it is noteworthy that the fundamental principles on which the system was conducted were not called into question either by the Royal Commission of 1914 or by the Babington-Smith Committee of 1919. (*See* para. 61 of Report.)

* In this note, unless the context otherwise requires, the term "draft" should be understood as including telegraphic transfers.

2. In considering the question of the methods by which the funds required by the Secretary of State for the discharge of his liabilities should be drawn from India, it is necessary to distinguish between the abnormal conditions of the last few years and the situation as it may be expected to be when the rupee again has an effective stabilised international value.

Between the date of the publication of the Babington-Smith Committee's Report and January 1923, there were no sales of Council drafts in London, as explained in para. 10 of Memorandum No. 1. When the Secretary of State decided in January 1923 to reopen sales, market conditions were uncertain, and the question of regulating remittances so as to admit of substantial drawings from India, and at the same time avoid unsettling trade, gave rise to much consideration. It was then decided, at the instance of the Government of India, to supplement the weekly sales of Council drafts by purchases of sterling in India, rupees being sold by the Government of India, through the Imperial Bank, to the Exchange banks against telegraphic transfers of sterling to be placed to the credit of the Secretary of State in London at the Bank of England, *viâ* the London office of the Imperial Bank. The extent of the proposed remittances by sterling purchases in India, or the rates at which Government was prepared to effect them, were not announced in advance, nor were tenders invited. Government's operations were discretional, the guiding principle being to secure remittance on a substantial scale, and at the same time to avoid, as far as possible, excessive fluctuations in the rate of exchange.*

3. The following table exhibits the amount of remittances in the years 1922–23, 1923–24, 1924–25, and for the first nine months of 1925–26, distinguishing between amounts drawn by Council sales and by purchases of sterling:—

TABLE.

REMITTANCES BY THE GOVERNMENT OF INDIA TO THE SECRETARY OF STATE FOR INDIA SINCE 1922–23.

Year.	Sales of bills and telegraphic transfers on India by Secretary of State.	Purchases of sterling in India by the Government of India.	Purchases by the Secretary of State of proceeds of loans raised in London by Indian public bodies.	Total remittances.
	£	£	£	£
1922–23 -	2,570,026	70,000	2,126,210	4,766,236
1923–24 - -	8,738,705	13,100,000	1,302,959	23,141,664
1924–25 - -	7,579,162	33,191,000	700,000	41,470,162
1925–26 (9 months) -	Nil	37,566,500	Nil	37,566,500

From January 1923 to December 1925, the total remittances effected by purchases of sterling amounted to £83,927,500 while the corresponding figure in respect of remittances by Council drafts (including sterling taken over from Indian public bodies borrowing in London) was £23,017,100. In this connection two points may be noted: first, when exchange movements have been wide and market prospects uncertain, it was considered inconvenient to maintain offers of Councils unless conditions definitely pointed to an active demand for rupees at rates that commended themselves to Government. Council drafts were sold during 6 weeks from January to March 1923, 31 weeks in 1923–24, and 17 weeks in 1924–25. Secondly, it was decided in October 1925 that, for the time being, remittances should not be effected below the rate of 1*s.* $6\frac{3}{16}$*d.* (a figure corresponding closely to upper gold point on the basis of a 1*s.* 6*d.* gold rupee), and to meet all demands for remittance that might be forthcoming at this figure without making any binding announcement on the matter. Under these conditions the normal competitive element inherent in the tender system would be lacking and there would have been no point in instituting any formal offer of Council drafts. Under pre-war conditions the then standing offer of unlimited Councils at upper gold point would have operated (vide para. 11 of Annexure (i)). In these circumstances on the 21st October the Secretary of State addressed the following telegram to the Government of India:—

"A decision having been arrived at as to the rate at which Government remittances should be effected for the present, I have had under consideration

* Copies of despatches exchanged between the Secretary of State and the Government of India in 1923 will be produced if the Commission so desire.

the question whether, in accordance with practice in recent years in the busy season, it would now be expedient to reopen sales of Councils.

"The decision, however, not to remit below the definite figure of 1s. $6\frac{3}{16}d.$ for the time being, and, without making any public commitment to this effect, to meet all demands for rupees at this figure, makes the position exceptional, and, as during the continuance of this situation the invitation for competitive tenders for Councils would lack reality, I have decided not to take any action at present. Should it appear expedient at any time, the question will be reconsidered. The general question of the most suitable methods under normal conditions of making remittances is, you will understand, left untouched by this decision. This is a matter on which the Royal Commission on Currency will no doubt report. This refers to my telegram of the 14th October."

ANNEXURE.

Sale of Bills and Telegraphic Transfers on India.

(i) 1915 Regulations containing the pre-war conditions.

In supersession of previous notifications, the Secretary of State for India in Council publishes the following particulars as to the method of selling Bills and Telegraphic Transfers on India:—

Sale of Bills.

1. The Secretary of State for India in Council is prepared to allot on Wednesday in each week Bills of Exchange on the Government of India, the Government of Madras, or the Government of Bombay of an aggregate amount not exceeding that announced in a notice which will be previously exhibited at the Bank of England.

2. Tenders for such Bills will be opened at the Bank of England on each Wednesday at 1 o'clock.

3. Tenders must be made on forms which can be obtained on application at the Chief Cashier's Office at the Bank of England. They must be delivered, under cover, at the said office.

4. Any tender may be for the whole amount shown in the announcement or for any portion thereof not being less than Rs. 10,000. The amount of the tender or tenders submitted by or on behalf of any one person, firm, or company must not in the aggregate exceed the amount shown in the announcement. Tenders which appear to the Secretary of State in Council to be submitted in direct or indirect infringement of this rule will be rejected.

5. Each tender must state the rate of exchange at which the applicant is prepared to purchase a Bill or Bills of the amount for which he tenders or any less amount that may be allotted to him. The rate of exchange must be expressed in pence, or in pence and a fraction of a penny, per rupee; any fraction that is used must be either one thirty-second of a penny or a multiple of one thirty-second of a penny.

6. In the event of two or more tenders being made at the same rate, and the amount to be allotted being less than the amount of both or all, a *pro rata* allotment will ordinarily be made, subject to the condition that no Bill will be granted for a less amount than Rs. 5,000.

7. As soon as practicable after the opening of the tenders the result will be made known at the Bank, and the *maximum* amount to be allotted on the following Wednesday will ordinarily be announced at the same time.

8. On Wednesday afternoon persons who have tendered will, on application at the Chief Cashier's Office, be informed whether any allotment has been made to them.

9. Payment for Bills allotted on a Wednesday must be made on or before the following Tuesday.

10. Those applicants to whom an allotment of Bills has been made will be furnished with a form to be filled up with the particulars of the Bills desired, which must be left at the Chief Cashier's Office before 12 o'clock on the day preceding that on which the Bills are required; the Bills will be delivered next day on payment in cash not later than 2 o'clock.

11. In addition to the tenders mentioned above for Bills to be allotted on Wednesdays at 1 o'clock, applications may be made on any Wednesday after the result of the allotment has been announced (but not later than 3 o'clock), on Saturday between 11 and 12.30 and on any other day between 11 and 3, at the Chief Cashier's Office of the Bank of England for intermediate Bills drawn on the Government of India, the Government of Madras, or the Government of Bombay. No pledge can be given that such applications will be complied with; but, if intermediate Bills are granted, the following condition will be observed, viz., that if, at the preceding allotment, Bills have been allotted to the full amount previously announced, intermediate Bills will only be granted at rates exceeding by at least one thirty-second of a penny per rupee the minimum price at which an allotment was made. If, however, the minimum price has exceeded 1*s.* $4\frac{3}{32}$*d.* the rupee this condition will not be enforced, as the Secretary of State in Council is prepared to sell until further notice intermediate Bills at 1*s.* $4\frac{1}{8}$*d.* the rupee.

12. If an intermediate Bill is granted on a Tuesday, payment must be made on the same day; if a Bill is granted on any day other than Tuesday, payment must be made not later than the following Tuesday.

Sale of Telegraphic Transfers "Immediate" and "Deferred."

13. Applications for Telegraphic Transfers on the Government of India, the Government of Madras, and the Government of Bombay, will be received on behalf of the Secretary of State for India in Council at the Chief Cashier's Office at any time between 11 and 3, except on Saturdays, when the hours are from 11 to 12.30. Those which are received on Wednesday before 1 o'clock will be opened at the same time as the tenders for the weekly allotment of Bills; and, if transfers are then granted, the fact will be announced at the same time and in the same manner as the allotment of Bills. Transfers will be granted only in thousands of rupees, and in no case for less than one lakh; except that an applicant to whom a transfer has been granted at the time of the weekly allotment of Bills may be allowed an additional transfer of an amount (in thousands of rupees) less than one lakh, provided that such additional transfer is paid for (at the price fixed for the time being by the Secretary of State in Council) on the same day as the transfer originally granted. Applicants tendering on Wednesday before 1 o'clock both for Bills and transfers may, if they wish it, insert in their tender for transfers a request that, if that tender be not sufficiently large to secure an allotment of one lakh of rupees, it may be increased to the necessary extent by reduction of their tender for Bills.

14. If a transfer is granted on a Tuesday, payment must be made on the same day; if a transfer is granted on any day other than a Tuesday, payment must be made not later than the following Tuesday.

15. The necessary telegram to enable the amount of a transfer to be issued to the recipient in India will be despatched on the day on which payment for the transfer is made at the Bank of England. Immediate transfers will be payable in India on the day following the issue of the telegram; deferred transfers will be payable 16 days after the issue of the telegram.

General.

16. The sales of Bills and Telegraphic Transfers, and the rates at which they have been made, will be from time to time announced at the Bank of England, and the total amount sold up to date since the 1st of April, with the sterling realised, will be similarly announced on each Wednesday morning at 11 o'clock.

17. The Secretary of State in Council, while making this announcement as regards the practice to be ordinarily pursued, reserves to himself the right of rejecting the whole or any part of any tender and of departing in any respect without previous notice from the foregoing terms should circumstances render it expedient.

Special Notice.

Persons or firms applying for Bills or Telegraphic Transfers are hereby notified that by virtue of the provisions of Acts 22 Geo. III., cap. XLV., Section 10, and 41 Geo. III., cap. LII., every allotment of such Bills or Telegraphic Transfers is made subject to the express condition that no Member of the House of Commons be

admitted to any part or share therein, or to any benefit to arise therefrom. The Statute does not apply to contracts entered into by incorporated trading companies in their corporate capacity.

India Office,
22nd February 1915.

(ii) 1924 Regulations (the latest form).

The Secretary of State for India in Council offers for sale on Tuesday, 30th September 1924, Bills of Exchange and Telegraphic Transfers (Immediate and Deferred) on the Government of India, to the amount of fifty lakhs of rupees, payable at Calcutta, Madras, Bombay and Karachi. This and any subsequent sales will, until further notice, be regulated by the following conditions.

Conditions of Sale.

1. Dates of sales and the aggregate amount to be offered on each occasion will be announced in a notice exhibited at the Bank of England.

2. Tenders will be opened at the Bank of England on Tuesdays at 1 o'clock. They must be made on forms which can be obtained on application at the Chief Cashier's Office at the Bank of England.

3. Any tender may be for the whole of the amount shown in the announcement, or for any portion thereof which in the case of a Bill is not less than Rs. 10,000, and in the case of a Transfer (Immediate or Deferred) is a multiple of Rs. 1,000 and not less than Rs. 1 lakh. The amount of the tender or tenders submitted by or on behalf of any one person, firm, or company must not in the aggregate exceed the amount shown in the announcement. Tenders which appear to the Secretary of State in Council to be submitted in direct or indirect infringement of this rule will be rejected.

4. Each tender must state the rate of exchange at which the applicant is prepared to purchase the amount for which he tenders therein or any less amount that may be allotted. The rate of exchange must be expressed in pence, or in pence and a fraction of a penny, per rupee; any fraction must be either one thirty-second of a penny or a multiple thereof. No announcement will be made of the minimum rate at which tenders will be accepted.

5. Tenders for Immediate Telegraphic Transfers will rank for allotment with tenders at $\frac{1}{32}d.$ lower for Bills and Deferred Telegraphic Transfers. When a *pro rata* allotment is made, no Bill will ordinarily be granted for a less amount than Rs. 5,000, and no Telegraphic Transfer for a less amount than Rs. 1 lakh. Applicants tendering both for Bills and Transfers may, if they wish, insert in their tender for Transfers a request that if that tender be not sufficiently large to secure an allotment of one lakh of rupees it may be increased to the necessary extent by reduction of their tender for Bills.

6. On Tuesday afternoon tenderers will, on application at the Chief Cashier's Office, be informed whether any allotment has been made to them.

7. Payment for Bills and Transfers must be made before the Tuesday next after the day of allotment.

8. Applicants to whom an allotment of Bills has been made will be furnished with a form to be filled up with the particulars of the Bills desired, which must be left at the Chief Cashier's office before 12 o'clock on the day preceding that on which the Bills are required; the Bills will be delivered next day on payment in cash not later than 2 o'clock.

9. When a Telegraphic Transfer has been allotted the necessary telegram authorising payment in India on demand will be sent on the day on which payment for the Transfer is made at the Bank of England. Immediate Transfers will be payable in India on the day following the issue of the telegram; Deferred Transfers will be payable 16 days after the issue of the telegram.

10. Subject to further notice no "intermediate" Bills or Telegraphic Transfers will be offered for sale by the Secretary of State in Council.

11. The Secretary of State in Council reserves the right of rejecting the whole or any part of any tender, and of departing in any respect without previous notice from the foregoing terms should circumstances render it expedient.

SPECIAL NOTICE.

Persons or firms applying for Bills or Telegraphic Transfers are hereby notified that by virtue of the provisions of Acts 22 Geo. III., cap. XLV., section 10, and 41 Geo. III., cap. LII., every allotment of such Bills or Telegraphic Transfers is made subject to the express condition that no Member of the House of Commons be admitted to any part or share therein, or to any benefit to arise therefrom. The Statute does not apply to contracts entered into by incorporated trading companies in their corporate capacity.

INDIA OFFICE,
23rd September 1924.

APPENDIX 74.

Note submitted by Mr. C. H. Kisch, C.B., Financial Secretary to the India Office, entitled "Some considerations suggested by a review of the events of 1920 with reference to banking development in India."

The year 1920 was in many ways exceptional in the economic history of India as it was in the case of other countries. The year saw the attempt to establish the 2*s.* (gold) rupee, the revaluation of reserves on the new basis, and the eventual abandonment of the policy of active support to the exchange.

The events of the year may usefully be studied with regard to the lessons they can teach for future guidance. They bring out in a clear light certain difficulties, which, at any rate for a long time to come, may be expected to emerge if the Indian currency system is exposed to a severe test.

First, it is necessary to remove a source of complication, arising from the fact that the currency note reserve was revalued in October 1920 on a 2*s.* basis. It is convenient, for the purpose of unravelling the facts, to reconstruct the paper currency reserve on a 2*s.* basis in exhibiting the figures for 31st December 1919 for purpose of comparison with the position on 31st October 1920, when adjustments connected with the sales of Reverses were completed. If this is done the constitution of the reserve at the end of 1919 and at the end of October 1920 compares as follows:—

Paper Currency Reserve. (Rs. 15 = £1.)
(*Figures in lakhs of Rupees.*)

Date.	Gross note circulation.	Reserve.			
		Gold.	Silver.	Rupee Securities.	British Government Securities.
	Rs.	Rs.	Rs.	Rs.	Rs.
31st December 1919 - -	1,82,91	26,47	43,67	57,77*	55,00
31st October 1920 - -	1,59,58	23,75	59,41	68,07	8,35
Difference - -	—23,33	—2,72	+15,74	+10,30	—46,65

* Balancing figure.

The actual currency contraction in the first ten months of 1920 as exhibited by the change in the reserve was:—

Notes - - -	Rs. 23·33 crores.
Silver - - -	Rs. 15·74† ,,
	Rs. 39·07 ,,

† The amount corresponds to the net return (Rs. 14·87 crores) of rupees and half rupees in the first nine months of 1920, as shown in Statement VIII of the Controller of Currency's Report for 1920–1.

The decrease in the currency reserve gold holding of Rs. 2·72 crores is not regarded as expansion, inasmuch as the gold was not available for purposes of currency.

The amount received in India in payment for Reverses sold in the period (January to September) was Rs. 46·93 crores, and the net reduction in the gold holding represented a contracting power of Rs. 4·08 crores, on the approximate basis of the selling price of gold at the time. The extent to which these transactions desiderated currency contraction was thus Rs. 51·01 crores. This may be compared with the actual contraction effected of Rs. 39·07 crores as set out formally in the following table :—

(*Figures in Rs. crores.*)

Rupees received for sterling sold - - -	46·93	Contraction effected - - -			39·07
Net reduction of gold (at Rs. 15 per £) - -	4·08	Deficiency—			
		Issue of *ad hoc* Treasury bills -		10·30	
		Adjustment for gold at Rs. 15 -		1·36	
		Difference between rupee receipts for Reverses -	46·93		
		and sterling withdrawn	46·65		
				·28	
					11·94
Contraction desiderated -	51·01				51·01

The sum of Rs. 11·94 (say 12) crores represents in effect an appropriation to Treasury of funds which, having been received from the public in exchange for sterling or gold held in the reserve, should strictly have been appropriated to the reserve.

The figure may be regarded as roughly measuring the amount by which the due contraction was avoided in connection with the operations of 1920. Still, it has to be noted that actually Rs. 39 crores of currency contraction was effected.

The effect of this deflation on the banking position in India in 1920 may now be examined. The relevant figures of bank deposits and cash balances are shown in the tables that follow :—

Date.	Presidency Banks.			Exchange Banks.			Principal Indian Banks.		
	Deposits.	Cash balances.	Percentage.	Deposits.	Cash balances.	Percentage.	Deposits.	Cash balances.	Percentage.
31st Dec. 1919 -	75·9	23·6	31·1	74·4	30	40·3	59	12·2	20·7
31st Dec. 1920 -	87	26	29·9	74·8	25·2	33·7	71·1	16·3	22·9

All Banks.

Date.	Deposits.	Cash balances.	Percentage.
31st December 1919 - -	209·3	65·8	31·4
31st December 1920 - -	232·9	67·5	29·0

Here we may note :—

(1) that the aggregate deposits of the Presidency, Exchange, and principal Indian Joint Stock Banks increased by Rs. 23½ crores in the year 1920;

(2) that of these Rs. 23½ crores additional deposits, about half accrued to the Presidency Banks, and half to the Indian Joint Stock Banks, while the deposits of the Exchange Banks were practically unaltered;

(3) that there was a small decline in the cash percentage in the case of the banks as a whole and a larger decline in the case of the Exchange Banks, whose position was presumably influenced specially by the sale of reverse councils.

On the above statistics it seems impossible to resist the conclusion that such currency deflation as was achieved through the sale of Reverses was partially countered by the expansion of bank credit.

The discount policy of the Presidency Banks is illustrated in the following table :—

Discount Rates of the Presidency Banks in 1920.

Date.	Bank of Bengal.	Bank of Bombay.	Bank of Madras.
Rates at beginning of 1920.	5	5	6
January - -	6 (14th)	6 (22nd)	7 (31st)
February - -	7 (11th)	7 (4th)	8 (14th)
April - -	—	8 (8th)	—
	—	9 (22nd)	—
May - - -	—	8 (13th)	9 (1st)
	—	7 (27th)	—
June - -	6 (10th)	6 (16th)	8 (19th)
July - -	5 (1st)	5 (31st)	7 (10th)
	—	—	6 (24th)
November - -	6 (4th)	6 (4th)	—
	7 (18th)	7 (12th)	7 (12th)

These rates might appear not to indicate any such exceptional efforts to control credit as might have been expected at a time when exchange was falling and currency contraction was being effected. But according to the report of the Controller of Currency on the year 1920–1, the 5 per cent. rate which ruled for a period in the summer "can hardly be considered a true index of the state of the market," and the average rate for accommodation in the bazaar, as calculated from the shroffs' discount rate for traders' bills, ranged in the year from 8 to 11 per cent. Moreover, the Controller of Currency observes that: "The continued demand for remittances in the early months of the year, and the large amount of reverse councils offered to the public, created a fictitious stringency in the market which is reflected in the bank rates." The average rate of the Bank of Bengal for the year was about ½ per cent. higher than the average for the two previous years, while the average increase was greater in the case of the Bank of Bombay.

Mr. Denning, in his note on the sale of reverse councils in 1920, observes that: "The currency was not contracted to the full extent of the amount realised by the sale of reverse councils, as it was feared that the money stringency which would have resulted might have seriously dislocated business generally." These remarks must of course be applied to the banking position, and it must be accepted that the view of the authorities at the time was that the advantages, from the point of view of exchange, of creating a greater stringency in the money market, were likely to be more than counterbalanced by the anticipated detriment to trade and business. The facts set forth above bring those who are faced with the task of devising and working the Indian currency system up against a fundamental difficulty, that is, the inability, in the case of Indian conditions, to secure credit contraction on the scale and with the promptness that may be required to keep the situation in control.

Undoubtedly there were factors at work in 1920 which made it difficult to enforce greater contraction of currency and tended to the expansion of bank deposits. It is worth noting :—

(1) that there was a heavy revenue deficit which for 1920–1 came out at Rs. 26 crores, and a large exchange loss outside the revenue account to be financed;

(2) that there was a large outstanding amount of Indian Treasury bills with the public, the renewal of which would have become increasingly onerous as stringency increased;

(3) that the acquisitions of gold for sale to the public, which was credited to the paper currency reserve against the issue of notes, tended, in the first instance, to maintain the cash balances of the Presidency Banks;

(4) that the sale of reverse drafts, in so far as this did not involve corresponding currency contraction (as explained above), tended in the same direction as (3); and

contra (5) that the sales of gold which in the year amounted to £33½ millions (sovereigns weight) tended to displace currency in the hands of the public and facilitated the contraction of the note issue.

While some of the above factors no doubt had an inflationary tendency, it is difficult to assert with any confidence that the situation would have been susceptible of more rigorous control had they been absent, because the limit of deflation was set by the anticipated reaction of an increased stringency on business. This factor is likely to be the dominant consideration in the future also, if a severe crisis of a similar type arises, and the facts will not be altered by any change in the agency charged with the task of applying the screw. Indeed, if this duty were entrusted to a bank whose main interests are commercial the effort to hold the fort may be less sustained than when undivided responsibility lay with the Government. The argument points to the desirability of creating, if possible, a genuine Central Bank, whose functions are closely circumscribed.

Certain suggestions emerge from this review of the events of 1920 which may be worth recording by reason of their bearing on future policy*:—

(1) If at any time Government remittances are suspended on account of exchange weakness, and cash balances at the bank remain high, tending towards expansion, the desirability of drawing on the cash balances for the contraction of the note issue should be kept prominently in mind.

(2) Reverse drafts should not ordinarily be met from Home Treasury balances, as the volume of currency in India is not thereby reduced. The sale of drafts should at once be brought to the debit of the sterling reserves, involving corresponding contraction in India.

(3) The extent of possible contraction at any given period of strain will be determined not so much by the strength of the sterling reserves as by the capacity of trade and business to endure the stress.

(4) A central bank in India, if charged with the duty of credit and currency control, will be working, owing to the undeveloped conditions of credit, under serious disadvantages as compared with central banks in countries with a highly developed credit organism. It is desirable to fortify the bank in every possible way and to protect it, so far as may be, from the risks involved in responsibilities, to the due discharge of which conditions in India are at present imperfectly suited.

(5) It is desirable that central banking in India should advance on cautious lines which take account of the special factors prevailing in India, and that the close association of Government with the central bank should be definitely recognised as an important element in the maintenance of a sound currency and exchange system.

APPENDIX 75.

Supplementary Notes and Statements submitted by Mr. C. H. Kisch, C.B., Financial Secretary, India Office.

(A) Note on "Suggested draft of lines on which a Gold Standard may be embodied in statutory form for India," as explained in Mr. Kisch's evidence.

(B) Note on "Suggested sales of Silver Bullion from the Currency Reserve," furnished by Mr. C. H. Kisch in amplification of the tables in Appendix III of his Memorandum No. 4 (Appendix 72).

(C) Statement showing the monthly balances and interest receipts of the Home Treasury for the years 1912–3 and 1913–4 and 1921–2 onwards.

(D) Statement showing the estimated and actual Home charges and the method of financing them during the four years 1921–2 to 1924–5.

* The actual application of these suggestions will vary according as the responsibilities for currency control rest with Government or are transferred to a central bank.

(A.)

Note on "Suggested draft of lines on which a Gold Standard may be embodied in statutory form for India," as explained in Mr. Kisch's evidence.

1. The Bank shall receive from any person making a demand at the head office in Calcutta or Bombay, or at any other office of the Bank which may be notified by the Bank for the purpose in the Gazette of India, gold bullion or gold coin which is not legal tender in India in exchange for Government rupees or bank notes at the rate of x grains troy of fine gold for Re. 1, subject to conditions to be notified by the Bank in the Gazette of India with the previous approval of the Governor-General in Council.

2. The Bank shall sell to any person in India who makes a demand in that behalf at the head office in Calcutta or Bombay or at any other office of the Bank which may be notified by the Bank for the purpose in the Gazette of India, and pays the purchase price in any legal tender gold at the rate of x grains troy of fine gold for Re. 1, or at the option of the Bank an equivalent amount of gold exchange payable in any country outside India approved by the Governor-General in Council, and maintaining a free gold market, subject to the following conditions, viz. :—

(*a*) No single demand for gold or gold exchange shall represent a less value in gold than approximately 400 ozs. of gold.

(*b*) The "equivalent amount of gold exchange," referred to shall be a sum in foreign currency calculated by the Bank, subject to the approval of the Governor-General in Council, to represent the standard price of x grains of fine gold in the country outside India concerned, less a percentage representing the normal charges of a remittance of specie from India to the country concerned. For this purpose the Bank shall notify in the Gazette of India, with the previous approval of the Governor-General in Council, the country or countries upon which gold exchange shall be issued and the rates of gold exchange per rupee.

(B.)

Note on "Suggested Sales of Silver Bullion from the Currency Reserve," furnished by Mr. C. H. Kisch in amplification of the tables in Appendix III of his Memorandum No. 4 (Appendix 72).

Two statements are attached, showing the result of an hypothetic sale of Rs. 15 crores of silver rupees on certain assumptions regarding the repurchase later of the coin equivalent of the amount sold.

Both statements contemplate that the metallic proportion of the note reserve will be maintained at 40 per cent. and take as their basis a gross circulation of Rs. 190 crores—i.e. approximately the issue outstanding at the end of September 1925.

Each statement assumes that a half-year's interest is earned on the sale proceeds of silver in the year of sale and lost in the year of repurchase. Gold added to the reserve to maintain the metallic ratio at 40 per cent. is assumed to be provided from sale of sterling securities and thus involves a loss of interest, a loss of half a year's interest being taken in the year in which the gold accretion takes place. Interest is reckoned throughout as 3 per cent. compound. Both statements assume that silver is sold at 30*d.* per ounce standard and repurchased at 34*d.* per ounce standard. A larger difference would of course exhibit the project in a more adverse light.

It will be observed that :—

(1) Statement A, which assumes the maintenance of the rupee holding at about 20 per cent. of the gross circulation, shows a net loss of £200,000 at the end of the seventh year.

(2) Statement B, which assumes the maintenance of the rupee holding at about 17½ per cent. of the gross circulation, shows a net loss of £313,000 at the end of the eighth year.

Hypothetical result of selling Rs. 15 crores silver until repurchase of same amount is necessitated in order to keep silver reserve up to (A) Rs. 40 crores and (B) Rs. 33 crores (normal absorption being taken at Rs. 7 crores per annum), and at the same time maintaining the metallic ratio at 40 per cent. in each case.*

STATEMENT A.

Period.	Stock at beginning of year.	Absorption.	Sales at 30*d.* per standard ounce.		Purchases at 34*d.* per standard ounce.		Stock at end of year.	Amount realised from sales (+) or cost of purchases (−).	Half-year's interest on same.	Amount of additional gold required to maintain a 40% metallic ratio.	Loss of interest during the year on sterling securities exchanged for gold.	Interest on net gain or loss at end of previous year.	Progressive gain (+) or loss (−).
			Amount	Proceeds.	Amount	Cost.							
	Rs. crores.	Rs. crores.	Rs. crores.	£ millions	Rs. crores.	£ millions	Rs crores.	£ millions.	£ millions.	Rs. crores.	£ millions.	£ millions.	£ millions.
1st year	90	7	5	2·323	—	—	78	+2·323	+·035	—	—	—	+2·358
2nd year	78	7	5	2·323	—	—	66	+2·323	+·035	—	—	+·071	+4·787
3rd year	66	7	5	2·323	—	—	54	+2·323	+·035	—	—	+·144	+7·289
4th year	54	7	—	—	—	—	47	—	—	—	—	+·219	+7·508
5th year	47	7	—	—	—	—	40	—	—	6	—·067	+·225	+7·666
6th year	40	7	—	—	7	3·685	40	−3·685	—·055	—	—·135	+·230	+4·021
7th year	40	8	—	—	8	4·211	40	−4·211	—·063	—	—·135	+·121	—0·267
													Deduct 0·067 (see footnote †)
													Net loss —·200

STATEMENT B.

Period.	Stock at beginning of year.	Absorption.	Sales Amount	Sales Proceeds.	Purchases Amount	Purchases Cost.	Stock at end of year.	Amount realised from sales (+) or cost of purchases (−).	Half-year's interest on same.	Amount of additional gold required to maintain a 40% metallic ratio.	Loss of interest during the year on sterling securities exchanged for gold.	Interest on net gain or loss at end of previous year.	Progressive gain (+) or loss (−).
1st year	90	7	5	2·323	—	—	78	+2·323	+·035	—	—	—	+2·358
2nd year	78	7	5	2·323	—	—	66	+2·323	+·035	—	—	+·071	+4·787
3rd year	66	7	5	2·323	—	—	54	+2·323	+·035	—	—	+·144	+7·289
4th year	54	7	—	—	—	—	47	—	—	—	—	+·219	+7·508
5th year	47	7	—	—	—	—	40	—	—	6	—·067	+·225	+7·666
6th year	40	7	—	—	—	—	33	—	—	7	—·214	+·230	+7·682
7th year	33	7	—	—	7	3·685	33	−3·685	—·055	—	—·293	+·230	+3·879
8th year	33	8	—	—	8	4·211	33	−4·211	—·063	—	—·293	+·116	—0·572
													Deduct 0·259 (see footnote †)
													Net loss —·313

* One rupee contains $\frac{55}{148}$ standard ounces of silver:—

(i) Value at 30*d.* per standard ounce = £0·04645; (ii) Value at 34*d.* per standard ounce = £0·05264.

† If there were no sales or purchases of silver and absorption proceeded at the same rate as is shown in the statements above, the exchange of sterling securities for gold in order to maintain a 40 per cent. metallic ratio would have taken place in Statement A in the 7th year to the extent of Rs. 6 crores of gold, and in Statement B in the 7th and 8th years, when Rs. 5 crores and Rs. 8 crores, respectively, of gold would be required. The loss of interest which this would involve, calculated as in the table above, amounts to £67,000 in the 7th year in Statement A, and £56,000 in the 7th year and £203,000 in the 8th year in Statement B. The sum of £67,000 should, therefore, be deducted from the loss in Statement A, leaving a net loss of £200,000, and the sum of £259,000 from the loss in Statement B, leaving a net loss of £313,000.

(C.)

Statement showing the Monthly Balances and Interest Receipts for the Home Treasury for the years 1912–3 and 1913–4 and 1921–2 onwards.

Date.	Total balance.	Interest during the year.
1912.	£	
30th April	16,351,547	
31st May	18,962,965	
30th June	16,199,961	
31st July	13,146,764	
31st Aug.	13,373,198	
30th Sept.	13,699,222	
31st Oct.	9,117,207	
30th Nov.	7,574,043	
31st Dec.	9,698,384	
1913.		
31st Jan.	7,993,402	
28th Feb.	9,173,348	
31st Mar.	8,783,970	1912–3 £372,171
30th April	8,665,454	
31st May	10,145,978	
30th June	10,529,034	
31st July	7,520,316	
31st Aug.	7,131,708	
30th Sept.	6,480,196	
31st Oct.	3,998,521	
30th Nov.	4,493,475	
31st Dec.	4,880,120	
1914.		
31st Jan.	4,833,388	
28th Feb.	7,123,843	
31st Mar.	8,132,770	1913–4 £205,690
1921.		
30th April	6,582,207	
31st May	9,524,452	
30th June	10,046,163	
31st July	7,872,344	
31st Aug.	6,170,590	
30th Sept.	5,285,756	
31st Oct.	2,012,933	
30th Nov.	3,600,978	
31st Dec.	3,748,976	
1922.		
31st Jan.	2,406,841	
28th Feb.	2,600,141	
31st Mar.	9,052,175	1921–2 £228,341
30th April	7,533,757	
31st May	6,247,463	
30th June	5,844,030	
31st July	9,473,984	
31st Aug.	10,306,807	
30th Sept.	10,771,142	
31st Oct.	7,693,386	
30th Nov.	11,061,648	
31st Dec.	12,904,644	
1923.		
31st Jan.	13,445,508	
28th Feb.	13,593,487	
31st Mar.	9,895,338	1922–3 £153,152
1923.	£	
30th April	7,110,908	
31st May	7,036,570	
30th June	11,904,792	
31st July	14,358,835	
31st Aug.	20,827,118	
30th Sept.	22,897,145	
31st Oct.	26,449,421	
30th Nov.	26,061,603	
31st Dec.	20,628,356	
1924.		
31st Jan.	12,052,585	
29th Feb.	11,366,646	
31st Mar.	10,671,310	1923–4 £387,385
30th April	12,507,225	
31st May	10,901,228	
30th June	11,420,770	
31st July	11,079,952	
31st Aug.	10,372,111	
30th Sept.	15,390,009	
31st Oct.	21,838,130	
30th Nov.	19,415,101	
31st Dec.	22,425,456	
1925.		
31st Jan.	15,646,959	
28th Feb.	14,834,163	
31st Mar.	13,315,399	1924–5 £461,135
30th April	10,352,081	
31st May	8,795,957	
30th June	12,081,240	
31st July	9,025,603	
31st Aug.	10,867,404	
30th Sept.	17,911,954	
31st Oct.	16,089,531	
30th Nov.	15,653,787	
31st Dec.	15,754,483	
1926.		
31st Jan.	16,230,001	
28th Feb.	17,281,489	to 28.2.26 £410,453
31st Mar.	16,195,813	1925–6 (forecast) £461,962

(D.)

Statement showing the Estimated and Actual Home Charges and the method of financing them during the four years 1921-22 to 1924-25.

1921-22.

Home Charges.	Budget.	Actuals.
	£	£
Net expenditure	27,561,300	27,748,980
Capital expenditure not charged to Revenue:		
Railways	14,336,800	13,564,664
Irrigation, &c., Works	35,400	490,939
New Capital at Delhi	286,700	159,778
Bombay Development Scheme	945,000	746,410
Indian Posts and Telegraphs Department	1,000,000	—
Public Works Department	110,000	—
	44,275,200	42,710,771

Financed as follows.	Budget.	Actuals.
	£	£
Debt (including debt of Railway Cos.)—Net receipts	5,000,000	14,805,114
Transfers through Paper Currency Reserve	8,350,000	2,501.159
Transfers through Gold Standard Reserve	2,500,000	—
Net recoveries from Imperial Government	29,073,300	27,144,167
Miscellaneous: Remittance and Deposit items—Net receipt	—	160,286
Decrease of balance	1,355,100	—
	46,278,400	44,610,726
Less—		
Purchase of gold	100,000	109,913
" silver	—	1,384
Miscellaneous: Remittance and Deposit items—Net payments	1,903,200	—
Increase of balance	—	1,788,659
	44,275,200	42,710,771

1922-23.

Home Charges.	Budget.	Actuals.
Net expenditure	32,182,200	30,238,071
Capital expenditure not charged to Revenue:		
Railways	18,465,000	9,868,149
Irrigation, &c., Works	324,900	407,659
New Capital at Delhi	181,000	179,037
Bombay Development Scheme	221,100	259,088
	51,374,200	40,952,004

Financed as follows.	Budget.	Actuals.
Debt (including debt of Railway Cos.)—Net receipt	18,503,200	31,329,605
Transfers through Paper Currency Reserve	5,346,800	—
Transfers through Gold Standard Reserve	10,500,000	—
Net recoveries from Imperial Government	12,153,400	3,365,481
Council Bills	—	2,570,026
Sterling purchased in India	—	70,000
" obtained in England	—	2,126,211
Miscellaneous Remittance and Deposit items—Net receipt	1,612,300	2,315,931
Decrease of balance	2,758,500	—
	51,374,200	41,777,254
Less—		
Transfers through Paper Currency Reserve	—	546
Increase of balance	—	824,704
	51,374,200	40,952,004

1923-24.

Home Charges.	Budget.	Actuals.
Net expenditure	30,354,074	29,553,769
Capital expenditure not charged to Revenue:		
Forest	2,200	636
Stationery and Printing	—	8,500
Improvement of Public Health	—	1,918
Railways	19,000,000	9,897,765
Irrigation, &c., Works	555,276	242,529
New Capital at Delhi	85,800	60,660
Bombay Development Scheme	117,900	142,922
Hydro-Electric Schemes	—	223
Industrial development	1,450	—
	50,116,700	39,908,922

Financed as follows.	Budget.	Actuals.
Debt (including debt of Railway Cos.)—Net receipt	15,119,800	17,537,545
Net recoveries from Imperial Government	4,787,400	5,645,713
Transfers through Paper Currency Reserve	5,845,000	—
Council Bills	} 22,155,000	8,738,705
Sterling purchased in India		13,100,000
" obtained in England		1,302,959
Sale of gold in India	—	2,000,000
Miscellaneous Remittance and Deposit items—Net receipts	—	300,703
Decrease of balance	2,915,100	—
	50,822,300	48,625,625
Less—		
Transfers through Paper Currency Reserve	—	8,151,707
Increase of balance	—	564,996
Miscellaneous Remittance and Deposit items	705,600	—
Net payment	—	—
	50,116,700	39,908,922

1924-25.

Home Charges.	Budget.	Actuals.
Net expenditure	30,110,690	26,897,570
Capital expenditure not charged to Revenue:		
Railways	11,568,400	6,324,235
Irrigation Works	1,124,668	493,237
New Capital at Delhi	53,800	52,946
Bombay Development Scheme	76,112	12,688
Miscellaneous	420	5,627
	42,934,090	33,786,303

Financed as follows.	Budget.	Actuals.
Transfer through Paper Currency Reserve	10,000,000	—
Council Bills	—	7,579,162
Sterling from India	26,000,000	33,191,000
" " England	—	700,000
Net recoveries from Imperial Government	5,107,000	3,060,825
Miscellaneous Remittance and Deposit items—Net receipt	—	17,506
Decrease of balance	2,824,490	—
	43,931,490	44,548,493
Less—		
Debt (including debt of Railway Cos.)—Net discharge	244,300	235,221
Enemy Ships: Revenue Transfer	—	1,400,000
Transfer through Paper Currency Reserve	—	5,996,636
Miscellaneous	—	—
Remittance and Deposit items (net payment)	753,100	—
Increase of balance	—	3,130,333
	42,934,090	33,786,303

APPENDIX 76.

Statement* of evidence submitted by Sir James Brunyate, K.C.S.I., C.I.E.

I.—Preliminary.

I have had the advantage of seeing the memoranda which have been prepared in the Finance Departments of the Government of India and the India Office and communicated, as I understand, to the Royal Commission.

2. In the present re-examination of the Indian Currency problem the Royal Commission are confronted with a number of new conditions: the rehabilitation of sterling; the *de facto* stabilisation of the rupee at 1*s.* 6*d.*; the balancing of the Indian Budget; the reattainment of normality in silver prices; and so forth. Without attempting to distinguish between the relative importance of all the new, or now specially significant factors, I may refer to the following as having doubtless specially influenced the personal opinions expressed below:—

(i) The change of attitude among monetary authorities in regard to the self-sufficingness of a gold standard and to the methods of operating it.
(ii) The remarkable extent to which the note-using habit has developed in India in recent years.
(iii) The experience gained of a unified Imperial Bank for India and the resulting extension of branch business.

3. The proposals of the Indian Finance Department embrace two main projects: (1) the establishment of a gold currency, and (2) the investment of the Imperial Bank with certain important functions of a Central Bank. Speaking generally, I think the first proposal open to decisive objection. I see advantages in the second, and not least the fact that it tends to withdraw monetary problems from the political arena. But it is a serious drawback that the only institution available for the *rôle* of Central Bank should be a Bank so definitely commercial in character.

II.—Choice of Standard.

4. In the last few years India has had an interesting and not unsuccessful experience of a "free currency." There is no doubt, however, that she should settle down again upon a gold basis. But she should realise what a gold standard now means: a managed currency with the management centred in New York, or at the best, concerted between the Federal Reserve Board there and the Bank of England in London, each acting, I assume, in close touch with its respective Government. India cannot expect an equal voice in this determination of common policy, but she should get what hearing she can. I think it important, therefore, (1) that machinery should be established in London for regular joint consultation between the Governor of the Bank of England, the London representative of the Imperial Bank of India and a representative or representatives of the Secretary of State in Council; and (2) that India should hold a considerable stock of gold. I incline towards holding that gold in India as the best means in actual practice of securing independence in the use of it. But if that is to be the case the exchange arrangements should be such that it may be freely used. [See para. 21 (C) below.]

5. I wrote above of a "gold basis," postponing for the moment the question of choice as between (*a*) a "gold standard" (*b*) a "gold exchange standard" and (*c*) a "sterling exchange standard." I hope I may be excused for dwelling on this question.

6. In the Government of India memoranda the possession of a gold currency is taken as the distinguishing feature of a gold standard. A standard based on gold but not accompanied by effective arrangements for the circulation of gold is treated as an "exchange standard." The idea that a gold system is not complete unless gold is the principal circulating currency is now, I think, rather old fashioned. As regards India in particular, we all held that view some 25 years ago, and apparently a considerable body of Indian opinion holds it now. The hope† then, I

* This statement was prepared prior to the receipt of the Royal Commission's questionnaire.

† Cf. "India and the Gold Standard," by Sir Henry Howard, K.C.I.E., C.S.I., page 46, para. 25 (1); also page 19 *ibid.*

think, was that the gold would return from circulation in times of depressed trade and so become a source on which to rely for the provision of sterling remittance. This expectation was from the first, I suspect, vain, and looking to the scheme actually before me I do not see any real probability that with 200 crores of notes and 150 crores of rupees in circulation, and perhaps 150 to 200 crores of bank deposits a redundancy of purchasing power will express itself, to any helpful extent, in the return of the relatively marginal supply of circulating gold.

The pre-war policy, which passed, I believe, about 100 crores worth of sovereigns into circulation prior to the outbreak of war, was not it is true assisted by the creation of an artificial vacuum through the forced withdrawal of rupees. But it synchronised with a constantly increasing demand for currency. It did have the effect of creating a limited circulation of gold, but there was never, I think, any indication of a helpful reflux of gold.

I would submit that a gold currency, though it may reasonably be considered on its own merits (see Section III below) should not be looked on as an integral feature of a gold standard.

7. Indeed with the use of gold coin abandoned in the United Kingdom and insignificant, I believe, in the United States, it is rather a question whether there still remains any essential distinction between a "gold standard" and a "gold exchange standard." I suppose it lies in the use of gold as the ultimate medium of international adjustments as distinguished from a mere undertaking to provide unlimited external credits, a procedure which suggests, and may, I think, come in some measure to entail, a relationship of monetary subordination to the centre on which the foreign credits are given. It is noteworthy, however, that the arrangements made by His Majesty's Government and the Bank of England for supporting the sterling exchange include the provision of credits in New York, and, generally, the policy of maintaining exchange by external credits is now, I should say, a fully accepted feature of post-war practice.

8. As regards this point, which is discussed in para. 21 (C) below, my conclusion as regards reverse remittance is in favour of reliance primarily upon issues of gold at par. As regards inward remittance, an immense part must, in India's special circumstances, be effected by the sale of rupee credits, but gold when imported and tendered to Government should be freely accepted at par. On this basis India would, I think, have a "gold standard" as distinguished from a "gold / sterling exchange standard" in the fullest and most practical sense of that term as now understood.

9. The question will still arise, however, for certain purposes, of "gold" *versus* "sterling." I feel no doubt that the stabilised rupee of the immediate future should be a rupee expressed in sterling. It would be idle too to assume that a mere prescription that demands for outward remittance should be granted in alternative forms of gold currency (dollars or sterling) at the option of the applicant would in itself effect anything. But there is, I think, a point of substance involved, namely, the question whether the Reserves should be specially constituted with a view to facilitating a turnover from a sterling to a dollar basis in the event of the status of sterling becoming at any time insecure. For example: (*a*) should a larger proportion of gold be held in the Reserves than would be necessary if the status of sterling were fully assured? (*b*) Should a proportion of the securities held be dollar securities? (*c*) Should the sterling securities held be exclusively British Treasury Bills as long as these continne to be available?

10. I will deal briefly with these points. I am a little inclined to think it an excess of caution to provide deliberately for a failure of sterling. But on general grounds there is a good case for a considerable gold holding and for holding sterling securities only in the most realisable form. The idea of holding dollar securities as well is at first sight rather fantastic, but India is likely to be a large and uneasy holder of exchange reserves, and while from her point of view it may be advantageous to spread her risks, it might be also of advantage to London to spread a possible strain in the event of exchange weakness in India synchronising with exchange weakness there. The arrangement would mean in effect that India would have dollar credits in New York instead of relying on London to provide them for her, if the occasion for seeking them should ever arise.

III.—Question of a Gold Currency.

11. A gold currency can only maintain itself in India if the persistent demand for gold as a commodity or as a store of value is kept constantly satiated. The dimensions of that demand are very large and very fluctuating. I cannot help thinking that this fact alone introduces an element of unevenness and precariousness sufficiently serious to make gold a rather unsatisfactory currency medium. But however that may be, I think the great advance which India has recently made in the use of notes should preclude the idea of so retrograde a step as the forcible introduction of gold. The point is fully brought out in the India Office memoranda.

12. I subscribe to the view that India should not be hampered in obtaining the gold she requires. She already does this in ample measure through trade channels, and should continue to do so. I would also, as the India Office memoranda suggest, accept gold freely when imported; allow tenderers the facility of getting gold converted into sovereigns; and recognise the sovereign as legal tender: so that holders of gold could hold it to the maximum advantage. But I would cease to issue it except for export. This would represent a sharp departure from past practice, but it would be facilitated by the long disappearance of gold from actual circulation in India. I think that the Government of India memoranda are right in seeking for some clear decision as to the future place of gold in the Indian monetary system. We should work definitely towards a gold currency, or definitely adopt as normal practice the use of gold exclusively for supporting exchange.

13. The practical objections to the Indian Finance Department's scheme for introducing a gold currency are fully brought out in the India Office memoranda: the unreality of the project, which will in effect instal a double currency system with the inconvenience incidental thereto; its cost, namely, a capital outlay sufficient to build New Delhi several times over, and an even more than proportionate revenue loss; its exceedingly drastic character, for the policy which informs it is surely that of "hacking one's way through" rather than of the tentative* statesmanship essential to such an enterprise; and its completely speculative character, in so far as it ignores the really grave risk of destroying the note-using habit. It is, perhaps, worth noting with reference to such criticisms as the last, that it is not necessary to the validity of an objection that the risk which it apprehends should be a demonstrable probability. A mere chance—if substantial—that the new policy will lead to the replacement of the smaller notes by gold would make the whole scheme a gamble.

IV.—Choice of Rate.

14. I think the rupee should be stabilised at 1*s.* 6*d.*, the rate already established. It has been proved by experience to be consistent in good years with the retention of a very large balance of trade in India's favour. [It may be noted here that a helpful feature in India's case is the size and elasticity of her demand for the precious metals, which give her an unusual power of accommodation to all ordinary variations in the trade balance, as reckoned on private merchandise, without seeking the aid of the special exchange machinery.] The price data in the two sets of official memoranda do not appear to contra-indicate the rate suggested. I speak guardedly on this point, however, because I am not very confident of the value or complete relevance of the data themselves. Nor again does there seem to have been such a degree of inflation, measured in terms of circulating currency and bank deposits as should make the present rate unsuitable. The available material on this point will perhaps be of interest, though precarious as regards the calculation of the rupee circulation and incomplete in taking the Imperial Bank, the Exchange Banks, and the Joint Stock Banks as the sole representatives of the country's credit machinery.

15. Between 1914 and 1925 the circulation of rupees and notes has increased from roundly 240 to 400 crores. The deposits† of the banks above-mentioned rose from

* If a gold currency had to be introduced it is a question whether this could not be done with less risk and upheaval, and also less cost, by discontinuing rupee coinage and issuing notes and gold until normal wastage and the growing aggregate demand for currency had reduced the extant rupees to a quantity only sufficing for everyday retail requirements. Such a method would admit of the steps taken being retraced if the experiment broke down.

† But with a deduction of one-third from the private deposits of the Presidency Banks (now Imperial Bank) to allow, as well as may be, for the fact that they hold part of the balances of other banks. The Government deposits are of course not taken.

about 80 crores at the end of 1913 to just over 160 crores at the end of 1923, the latest year for which I have particulars. The slender gold currency of the pre-war period has disappeared from circulation. These figures run fairly parallel to those of the United Kingdom, where £9 of notes per head are now said to be in use as compared with £4 of notes and gold per head before the war, and the deposits of the English Joint Stock Banks have risen from just over £800 millions to about £1,800 millions. Such statistics, of course, will never settle whether exchange should be fixed at this precise figure or that. But they may fairly be taken as suggesting that the present position is probably not fundamentally unsound. They help to transfer the burden of proof.

16. I have seen it objected that a 1*s*. 6*d*. rate has not yet been tested by an unfavourable monsoon. This difficulty would have been no less whatever *de facto* established rate had emerged from the currency convulsions of the post-war period. In this respect the responsibility lying upon the Royal Commission in recommending any named rate is far less onerous than that which the Fowler Committee faced in 1899. If the objection really means that after experience of a series of busy trade years followed by a deficient monsoon and slack trade a compromise rate, as it were, could be selected as fairly well adapted to good and bad years alike, it is, I think, wrongly conceived. Any rate established over a period of normal years must tend to break down in bad years unless sustained by the exchange machinery.

V.—Reverse Remittance and the support of Exchange.

(*a*) *General Considerations.*

17. The India Office memoranda bring out the fact that the accepted pre-war policy of supporting exchange "with all available resources" was fundamentally qualified. The sterling offered was not freely issued: it was doled out in "stated amounts weekly." Thus in 1920 a disparity was set up between the rate for reverses and the effective market rate of exchange. This limitation of offers of sterling was quite deliberate, and such a disparity might well arise even in a less abnormal crisis.

18. Under a fully operative gold standard no such limitation is recognised. In principle gold is freely issued for export. But (1) the issuing country relies on the discount rate to correct an excessive outflow. (2) It is also the tendency of modern practice to employ the discount policy to regulate credit and prices *antecedently* and thus limit the function of gold to marginal purposes. (3) The financial public accepts the necessary deflation. (4) They understand, too, that the maintenance of exchange is not an absolute obligation; or better perhaps, that, in the still unsettled conditions, temporary departures from the strict doctrine of a gold standard may from time to time be found necessary (cf. the "embargo" on foreign loans).

19. Speaking broadly, the first safeguard has as yet but limited scope for application in India in a period of exchange weakness. The policy of (2) is not, I suppose, applicable at all, though one may refer, perhaps, in this connection to the valuable practice now introduced of issuing "seasonal currency" on the security of trade bills. As regards (3) the Indian money markets are, I think, disposed to be somewhat specially intolerant of deflation, and it is this intolerance, I think, rather than any shortage of gold and sterling reserves, which may set a limit to the possibility of supporting exchange through a crisis of special severity. As regards (4), again, I think there is a disposition to expect more from the Government in India than the controlling authority can, as yet, wisely undertake as an absolute obligation, on the same plane, let us say, as a Government's obligations to its debt-holders. This consideration by itself, I think, suggests a strong objection to the retention by Government of undivided responsibility for exchange.

20. I deduce that Indian conditions are somewhat specially adverse to the efficiency and smooth working of a gold standard system, and that the great desideratum is to get on to lines of development which will eventually better those conditions. Meanwhile, failing more delicate methods of internal adjustment, though exchange may perhaps be sustained by sheer weight of reserves, the machine will be apt to work roughly and to cause the maximum of external disturbance.

(*b*) *Suggestions.*

21. I pass on to the particular suggestions which I would submit for the consideration of the Royal Commission :—

(A) Any gold or gold exchange system must be based on the two principles of—

(*a*) unlimited acceptance of imported gold at par (or unlimited issues of rupee credits at upper gold point) ;

(*b*) unlimited issues of gold for export at par (or unlimited issues of sterling credits at lower gold point).

I would adopt these principles in the Indian system, discarding the "dole" system hitherto in vogue for reverse remittance.

By "unlimited issues of gold" I mean unlimited in principle, but not exempt from such restraint as a Central Bank with high prestige may informally impose in the general interest. I would also recognise the "ear-marking" of Indian gold for London when it is thought desirable and is found possible to arrange it.

(B) I would hand over the note issue and exchange machinery, with their reserves, to the Imperial Bank for administration, subject to suitable arrangements for the association with the Imperial Bank in that duty of (1) the Government of India in India, and (2) the Secretary of State in Council in London (see, however, para. 24 below).

(C) I would rely for the support of exchange on gold issues for export rather than on the grant of sterling credits.

This, I presume, must be intended ultimately under Sir B. Blackett's scheme, and though I cannot think the change will be very welcome to Indian trade there is, I think, much to be said for it.

It is the actual practice under other gold systems which India is anxious to emulate. It offers some impediment, I take it, to the abuse and exploitation of remittance facilities, and it supplies a real function for gold held in India.

The privilege of unlimited credits in external money centres is a very generous facility, and I am not sure that it has been both conceded in theory and unreservedly applied and tried out in practice elsewhere. I have suggested already (para. 7 above) that it may give rise to a relationship akin to subordination to the money centre on which the credits are given. I suggest, too, for consideration, that in so far as Government and the Central Bank undertake the supply of unlimited credits they tend to hinder ordinary banking development, just as the supply of gold from huge central reserves necessarily renders superfluous any banking effort to draw gold from circulation.

It would seem also that a correctly operating system for remedying exchange weakness should not only be deflationary in its local effect, but inflationary in its external effect. This requirement is not met by the issue of credits. It would be met by the export of gold except in so far as it may be the policy of the receiving countries to regulate the expansion of credit independently of the state of their gold holdings.

(D) A policy of free issue of gold for export, or of unlimited sterling credits, demands considerable strength in gold and the highest degree of liquidity in other reserves (see paras. 9 and 10 above), and the reserves should be constituted accordingly. Such a policy is not, I think, consistent with a simultaneous effort, implying great dissipation of resources, to establish a gold currency.

(E) In some way—and I can see no better way than a pronouncement of this Commission, for the matter cannot be codified—the need during periods of exchange crisis for a considered policy of deflation requires to be emphasised. The normal conventions on the subject should be, as it seems to me, (i) that all gold export (or special sterling credit) transactions should be passed through the Paper Currency Reserve; (ii) that accretions to the Imperial Bank's balances (via "public deposits") through the discontinuance of the Secretary of State's drawings, should not be made the basis of an enlargement of credit; (iii) that credit generally should be restricted, and the Bank rate employed for this purpose as far as may be. "Policy" would lie in determining whether and how far these conventions should be departed from with reference to the circumstances of a particular occasion. This, it may be said, is what the Bank would do anyhow. But the matter is of great moment and calls for some formality.

(F) Such a deflationary policy might well be fortified, at any rate in a very prolonged period of depression, by the sale in India as bullion of the redundant rupees which return in periods of slack trade. This would tend to curtail purchasing power in strata not readily reached by banking influences.

VI.—Inward Remittance and the Secretary of State's Drawings.

22. As I do not advocate the transfer of silver purchases for rupee coinage to India and the Secretary of State's ordinary drawings can obviously be most conveniently met by bills of some kind, I contemplate that inward remittance would not be effected by gold movements, except so far as might be necessary from time to time to bring the Indian gold holding up to the accepted standard strength. As regards the bulk of inward remittance, therefore, the choice of method will, under my proposals, lie between (a) sale of bills by open tender in London, (b) purchase of sterling by open tender in India, or (c) purchase of sterling in India by the Imperial Bank on the lines recently followed.

Whatever method is adopted there would naturally be, under a correctly operating system, (a) a standing and unlimited undertaking to accept gold in India at par, and (b) at times when it was desired that gold should not be imported and tendered to Government, an unlimited undertaking to give Indian currency at upper gold point in exchange for sterling in London.

23. The present method of remitting [(c) above] has worked well in the special circumstances in which it was introduced, and in the circumstances, also abnormal, of the present time, and has, I think, proved itself a valuable innovation. I see nothing unmistakeably wrong in principle, though something to question in practice, in the view that the Secretary of State as a remitter on his own account should be free to operate on either side and as and when he judges best. No one in England, for example, expects the Bank of England to inform the world from day to day as to the progress it is making with preparations for remitting American debt. But it would be wrong and inappropriate to employ the secret method of purchasing sterling as the procedure by which to implement a general undertaking to supply unlimited rupee currency at upper gold point. The parallel to that would be the concealment of the inward movements of gold in this country. These two objectives of remittance, i.e. (i) the provision of the Secretary of State's requirements, and (ii) the maintenance of exchange at or within upper gold point, so largely overlap that there will be very little real scope, I think, for the employment of present methods, when more normal currency conditions have been re-established as the outcome of the Royal Commission's present labours. Finally, there is great practical force in the view that the Secretary of State is too dominating a factor in the restricted monetary world of India to claim the full liberties and privacy of a private remitter. I would not completely disallow the present system, but I think its chief usefulness will be at times when a period of exchange weakness is giving place to one of returning strength. At such transitional points it offers, I think, the best and a quite legitimate means of feeling the pulse of the market. When so used I think it should be accompanied by, say, the weekly disclosure of the amounts and rates negotiated.

VII.—Transfer of Central Banking Functions to the Imperial Bank

24. The expression of my views in para. 21 (B) is subject to proper consideration of the objection that the Imperial Bank is disqualified from exercising the functions of a Central Bank by its commercial character.

This objection (1) may be final and decisive; or (2) it can possibly be met by appropriate safeguards or restrictions.

As to (1), I have not the expert knowledge to estimate the weight to be attached to this objection. Similarly, as regards (2), I cannot, in any technical way, suggest safeguards. But I think that on this and other grounds there are, as I have already suggested, good reasons for associating the Governmental authorities both here and in India with the Bank in the determination of high monetary policy. The Government cannot divest themselves of ultimate responsibility for India's monetary well-being or, specifically, for great sums of public money made over to the control of a commercial institution. The choice lies, I think, between the creation of a Central Bank *ad hoc*, which might be premature now though probably an ultimate development, and a close association between Government and the only available alternative—the only

institution, too, which can systematically address itself to the extension of sound banking throughout India.

My inclination is to postpone the true Central Bank for the present and try, with any safeguards which expert advice may suggest, what is possible on the lines of the Indian proposals.

VIII.—Conclusion.

25. In these observations which I respectfully submit for the Royal Commission's consideration, I have felt and still feel perplexity on certain points (the gold export question and the banking question). But I think there can be little doubt as to the main aims to be associated with the immediate task of putting India's currency system on a gold basis. The latter object can be efficiently achieved by a "gold standard" (with or without a gold currency) or, as Sir Basil Blackett has shown in his Minute, with a "gold exchange standard." But (1) a sound standard to-day postulates banking control and a widely extended and closely inter-related banking system, and we have to try to foster that; and (2) there is, as it seems to me, a tendency for the monetary world to group itself, with the United States of America and the United Kingdom acting in concert as the dominant group, while later convalescents from exchange troubles fall into a status of something approaching monetary tutelage. It is perhaps some instinctive perception of this which lies behind the demand for a gold currency. I think that any new currency scheme for India should consciously aim at securing to her the maximum degree of monetary independence.

APPENDIX 77.

Supplementary Note by Sir James Brunyate, in reply to questions of Sir Purshotamdas Thakurdas on the subject of Government Remittances.

I.—Questions by Sir Purshotamdas Thakurdas.

1. A witness before the Royal Commission has said: "There are strong objections to attempting to tie up the Secretary of State by an advance monthly programme or anything of the kind." Do you agree with this?

2. It has also been said that "the action to be taken in regard to remittance of Government balances from India to England cannot be forecast with any accuracy for any length of time ahead." Does your experience at the India Office warrant your agreement with this?

3. What inconvenience, if any, would be caused to the Secretary of State if his requirements for sterling in London were supplied in accordance with his obligations, thus obviating the necessity for keeping such large balances in England as are referred to in the Report of the Controller of the Currency for the year 1924–5, viz.: minimum balance £10,403,565; maximum £22,718,629; average £15,120,145; the annual requirements of the Secretary of State being in the neighbourhood of £30,000,000?

II.—Note by Sir James Brunyate.

1. The Chairman asked me to submit a note on these questions and remarked (I write from memory) that they opened up far-reaching issues. That is indeed the case, though I have endeavoured to keep away from the remoter aspects of the remittance problem as much as possible.

I have assumed, for the purposes of the note, that a true Central Bank is established, holding the Treasury balances in India and London, transacting the remittance business of Government and managing the paper currency reserve. I assume also that gold is caused to be sent to India (by the discontinuance of councils and sterling purchases) for tender to Government to that extent only which may be

required under some independently accepted policy on the question of the gold holding (c.f. para. 22 of my written statement).

I propose to refer throughout to the "Indian Administration" (i.e. Secretary of State in Council *plus* Government of India) rather than to the Secretary of State in Council except where it is necessary to particularise the latter. The remittance question is in essence one which any unitary Government would have to face whose financial commitments and monetary system both required the provision of funds on a large scale in an external money centre.

2. *Question* 1. I am not told the context in which the statement cited in this question was made. I assume that it had reference to the Indian Finance Department's enumeration* of "principles" by which "the demands of Government on the Bank would be regulated" and especially to the principle rather cavalierly stated that the "India Office" would have to give the Bank "a definite demand for each month made some time before the beginning of the month, the amount of which the India Office would not be able to alter without the consent of the Bank."

I agree with the witness, if he meant, as I take him to have meant, that the idea of the Indian Administration pledging itself to its bankers to be bound finally by a forecast of its requirements is inadmissible. I suggest that the true principle is that the relations between the Administration and the Central Bank in this matter will be those of depositor and banker. These relations include in principle the right of the depositor (*a*) to get his money when he wants it and (*b*) to use it to his best advantage while he does not want it, the term "best advantage" in this case meaning of course the best advantage of India. Or alternatively, I would say that for this purpose the relations between the Indian Administration and the Central Bank should (*mutatis mutandis*) be those subsisting between His Majesty's Government and the Bank of England.

3. Passing from principles to practice, there is no doubt, of course, that the Administration, realising that it is an uncomfortably powerful customer, and being as closely interested in the proper functioning of the Bank as the Bank itself, will give the Bank all the assistance it can and show it at all times the highest consideration in dealing with difficulties inherent in the management of its account. The Bank on its side will, I think, realise that to hold the Administration's funds where they are wanted and to have them available when they are wanted is a primary obligation and will not be fidgeting itself to cut matters so fine that it must fall back on the plea that a forecast of some weeks back is not being fulfilled. Assuming, as we ought to do, a correct attitude on both sides, I think it is a little idle to try to "regulate" matters of routine which the parties will settle for themselves when they get to work.

4. *Question* 2. The "remittance of Government balances from India to England" is the counterpart and consequence of the trade demand for remittance from England to India. The Indian Administration does not say: "We are short of funds at home or we have excess funds piling up in India; let us sell councils (or buy sterling) and remit the surplus." What it says in effect is: "There is a keen trade demand for remittance to India just now; we must meet it, or trade will be hampered." (Or alternatively, for it depends on the standpoint:† "The trade demand is keen; now is a good time for getting some of our funds sent home.")

Thus the difficulty of forecasting the dates and amounts of Home remittance is not solely a difficulty arising from uncertainty as to the pace and amount of the Administration's outgoings in London or its incomings and outgoings in India; but also the difficulty of forecasting the volume of the trade demand for remittance and the periods at which it will come forward in strength.

* Mr. Denning's Memorandum on "Transfer of Management of the Paper Currency to the Imperial Bank of India," para. 16.

† See Report of the Babington Smith Committee, para. 61: "We agree with the Chamberlain Commission in holding that council drafts are sold not for the convenience of trade but to provide the funds needed in London to meet the requirements of the Secretary of State on India's behalf in the widest sense of the term." (The whole paragraph should be read.) I do not think it is possible fully to subscribe to this when now envisaging future conditions. If these two objects of Home remittance admit of discrimination, I prefer to give priority to the trade, i.e. the monetary aspect. Personally I think them complementary. In the long run and as a matter of theory, the need of trade for remittance to India is identical with the Administration's need for funds in London.

The first difficulty is great* and the second is insuperable. It demands, not the statistician's gift of estimating, but that of prophecy.

5. *Question* 3. The system of financing the Home Treasury must not only provide for meeting obligations at due date, but be consistent with the use of surplus funds (wherever located) to the best advantage, and in particular with due regard to sound monetary conditions.†

6. I have just said that the amount of remittance to London is the counterpart of, and dependent on, the demand for trade remittance to India. The sums remitted to London by the satisfaction of this demand are assigned, in the first instance, towards providing the immediate requirements of the Home Treasury so far as the Administration's Treasury balances in India have sufficient surplus for meeting them. If the surplus is not sufficient the Administration will have to borrow in sterling. If it is more than enough further receipts in England are credited to the Administration's Home Treasury account. When the whole surplus of Treasury balances in India has thus been drawn off any further trade demand for remittance can only be satisfied by the crediting of receipts for bills to the paper currency reserve in London and the disbursement of currency to the payees from the paper currency reserve in India. Thus the total credited to the Treasury balances in London, *plus* the amount credited to the paper currency reserve in London, is equivalent to the total trade demand‡ whatever that may be. If Indian Treasury funds are low less will go to the Home Treasury and more to the Home branch of the paper currency reserve. If Indian Treasury funds are ample more will go to the Home Treasury and less to the Home branch paper currency reserve. A case conducing designedly to the latter result is where, as in recent years, the Administration effects all its borrowing in India, including provision for a large part of the Home requirements on capital account. Another case is when revenue and other receipts exceed and expenditure falls below anticipation.

7. Primarily then, and dealing for the moment with the London side only, the policy to which these questions tend, of stringently keeping down the Treasury balances in London to a real minimum, would only enhance the amounts requiring to be credited to the paper currency reserve in London. In either case the sums in question would probably be invested in British Treasury bills, and, so far as the London side of the matter is concerned, the policy would apparently be nugatory.

8. I turn next to the Indian side. If an unintended surplus of Government balances accrues in India the Central Bank may adopt one of three alternatives :—

(*a*) Keep the unintended surplus inert, i.e. refrain from making it a basis for the creation of credit ;

(*b*) Release it, as it were, to trade by granting credit on the strength of it ;

(*c*) Release it to trade by meeting council drafts or purchasing sterling from this source instead of from the paper currency reserve in India.

Alternative (*a*) would not ordinarily, I think, be the correct course. The unexpected yield of taxation and borrowing or economy of expenditure which has produced the unintended surplus balance is equivalent to arbitrary deflation and normally needs to be corrected by the release of the funds thus drawn into the

* The uncertainty surrounding the forecasting of Ways and Means is well brought out in para. 27 of Sir Basil Blackett's speech introducing the Budget for 1926–7 :—"I am inclined to think that the phraseology consecrated by long usage in Indian budget speeches which refers to the Ways and Means portion of the statements as a 'Ways and Means Budget' is somewhat misleading, in that it may tend to give the public the impression that the figures and estimates in the Ways and Means portion of the budget make a claim to comparative exactness not inferior to that made by the figures of our revenue and expenditure estimates. Our Ways and Means budget is intended to be and necessarily must be illustrative rather than exact. The Ways and Means figures bring together the net results of operations of very varying character all over India and Burma and in London. To a large extent these operations are either not under the control of the Government of India at all or only very indirectly under their control . . . In these circumstances it is neither possible nor desirable to attempt to lay down a rigid Ways and Means programme far in advance. The only result of doing so would necessarily be to swell our balances needlessly."

† See first footnote to para. 4.

‡ It would take me too far from any purpose disclosed in these questions to discuss the whole question of how far action by the Administration and Central Bank can influence, and should be directed towards influencing, the volume of the total trade demand for remittance, but I think that in every instance the case for such action would be found to stand or fall on its own merits. The case of gold shipments is touched on in para. 22 of my written statement: that of lending surplus balances in India *versus* remitting them to London, is examined later in this note as my questioner may perhaps have had it in mind.

central banking balances. The choice between alternatives (*b*) and (*c*) presents a banking problem. The distribution of credit by means of the remittance method [alternative (*c*)] directs credit automatically into channels of trade where it is undoubtedly wanted. It also, *pro tanto*, effects, instead of postponing, the adjustment of the balance of trade. Normally it is, I think, the right course. But exceptionally, perhaps, there may be conditions of stringency justifying the creation of credit but more or less independent of the monetary requirements which the sale of councils and sterling purchases directly satisfy. In such cases it might be right to use high banking balances, originating in undesignedly high Government balances, for this purpose, leaving requirements directly connected with external trade to be financed through councils or sterling purchases adjusted through the paper currency reserve.

9. I should add, perhaps, that a Central Bank, in the exercise of its regulating functions, might in practice find somewhat wider scope for the employment of discretion in moving Government funds than the limited case which I have ventured to formulate. But such an authority would certainly recognise the principles (1) that the building up and retention of excessive Government balances as a normal means of supplying loanable capital is not sound practice; and (2) that remittance through the paper currency reserve, at a time when remittance through Treasury is practicable, involves inflation, and ultimately, therefore, a correcting deflation.

10. Finally it may be added (1) that surplus balances in England are earning interest for Government while surplus balances in India are not; and (2) that if surplus balances have in fact accrued at home there is no point in letting that interest go to the bank (which would invest them on its own account if the Indian Administration did not) instead of to the revenues of India.

11. My views and conclusions are :—

(1) The maintenance of the Home balances at a minimum is not an end in itself and needs neither to be sought after nor deprecated. The contrary view arises, I think, from looking at the Home Treasury as a mere disbursing office and forgetting its place in the general exchange mechanism of India.

(2) Normally, the only way of keeping the Home Treasury balances at a low average level is by maintaining a close correspondence between estimates and actuals : not as regards the Home transactions only or primarily, but as regards all transactions, revenue or capital, Home or Indian, which react on the aggregate Government balances. Sound estimating is of course always an end in itself and to this extent, but only consequentially, low Home balances are desirable.

(3) Exceptionally, there may be reasons as to which a central bank should be a safe judge, and a commercial bank, however public spirited, hardly an impartial judge, for special steps to keep Indian balances temporarily at a relatively high level with the consequence of keeping Home balances relatively low.

(4) When surplus balances accrue at home as the result of discrepancy between estimates and actuals it is possible to look on such surplus funds as provision for the Administration's prospective requirements (see last sentence of first footnote to para. 4). But this fact is not the cause of the surplus funds being sent to London. Nor is such antecedent provision called for on its own merits.*

(5) Such surplusage is, in essence, a temporary balancing reserve (akin in function to the Home branch of the paper currency reserve) set up by one group of normal exchange transactions and liable to be used up (or in other words retransferred to India) by another (e.g. Reverse bills ; c.f. also the transfers and retransfers described in the Paper Currency Report for 1924–5, page 15).

12. Applying these results to the question put to me, I would summarise as follows the points which are essential to an adequate answer :—

(A) *What sums are needed by the Home Treasury ?*—The Home expenditure of the year, including such large and uncertain factors, outside the Secretary of State's control, as the Railway capital expenditure.

(B) *What sums are available for remittance to the Home Treasury ?*—The whole surplus of the Treasury balances in India, including not only that sum (an estimate

* Indeed, any plea that this aim should be deliberately pursued seems opposed to Budget principles. I am of course assuming that in the conditions of the future exchange will be fully maintainable at the chosen rate. This assumption could be less safely made in the pre-war period which, taken as a whole, was a tentative period. And in recent years there has of course been no normal rate.

of A above) which is included in the Budget for remittance, but any further surplus which accrues through under-estimation of receipts of any kind or over-estimation of expenditure of any kind.

(C) *What sums will, in fact, be remitted to the Home Treasury?*—The whole amount (up to the limit of B) of the quite incalculable trade demand for remittance to India.

While, therefore, it is clear that no inconvenience would be caused to the Secretary of State if the provision of funds was kept in exact accord with the maturing of obligations, it does not follow, as the question seems to assume, that the recurrence of large Home balances could thereby be obviated. This can only be achieved by exact estimating—Home *and* Indian—and this exactitude, on the Ways and Means side particularly, may often be not even roughly obtainable.

Finally, if the *total* Home remittance (paper currency as well as Treasury) is in question, no estimate worth the name is possible and no limit can be set.

APPENDIX 78.

Statement of evidence submitted by Mr. A. Bowie, General Manager of the Allahabad Bank, Ltd. (affiliated to the P. & O. Banking Corporation, Ltd.).

1. I have the honour to submit, as an expression of my views from the standpoint of indigenous banking, (*a*) a note on the question of the control of the note issue and on what principles should control or management be transferred to the Imperial Bank of India, and (*b*) a note on the question of what measures are desirable to secure greater elasticity in meeting seasonal demands for currency. I beg the favour of your placing these notes before the Members of the Royal Commission on Currency.

2. The control and management of the currency should be a function of Government and ought not to be delegated to an institution, however powerful, owned by, and managed primarily for the profit of, a body of private shareholders.

3. The result of the working of the Imperial Bank Act has been to erect a quasi-state bank to a position where it is placed above economic competition and has left the indigenous banks defenceless against the operations of the state bank.

4. The clauses of the Act are framed to give the widest permissive powers to the Bank to engage in general banking business and so that nothing in the Act may be construed as restrictive, it is specifically stated in the Act that nothing shall be deemed to prevent the Bank from allowing any person who keeps an account with the Bank to overdraw such account without security to such extent as may be prescribed.

5. Further, no additional measure of security is provided by the terms of the Imperial Bank of India Act, 1920, in regard to the statutory information to be shown in the balance sheet. In fact, the measure of protection to the public in this respect is not equal to that demanded from the banks established under the Indian Companies Act in Form F, viz., to disclose the secured and unsecured advances and, as a guarantee of the independence and impartiality of the control of the bank, to show the sums due by the directors as principals and guarantors and as partners and directors in firms and companies.

6. The privileged position of the Imperial Bank of India hinges on the prestige accruing to them as Government bankers which, in the eyes of the public, secures to them the support of Government in an emergency. This position in itself means an actual monetary advantage in that, with their credit as Government bankers, the Imperial Bank of India ought always to be able to borrow at lower rates than other banks.

7. One restriction placed by the Act on the Bank's functions is that the Bank cannot engage in foreign exchange banking business so that the exchange banks working in India are relieved from the uneconomic competition of the Bank.

8. There are no obligations under the Act placed on the Bank requiring it to make advances to other banks against Government or other approved securities, so it is within the power of the Bank at any time, arbitrarily, to refuse banking accommodation.

9. The single condition imposed by the Bank Act requires the Bank to open 100 new offices within a stipulated period. As consideration for this undertaking of banking development, formerly carried out by other banks on their own resources, the Bank is given the facility of free transfer of funds and a monopoly as Government bankers of receiving the whole of the Government balances free of interest, military and regimental accounts, trust estates, municipalities, railways, ports, universities, schools, security deposits and various semi-public funds.

10. The use of interest-free funds, free transfer of funds, and the large payments it draws for its services in connection with the management of the Public Debt places the Bank in a position, where it meets with competition for banking business, to quote rates unprofitable to other banks. Indigenous banking development except within the organisation of the Imperial Bank is nullified. There is also the danger of banks being forced to seek profits in a class of business which ought to be outside the sphere of operations of properly managed banks. Both these conditions are conducive to a weak growth of indigenous banking. It is clear that there can be no strength in a nation's banking system which depends for its development on a state-aided institution placed above competition.

11. The strong competition of the Imperial Bank with indigenous banks is generally admitted. In argument it may be stated that through the operations of the Imperial Bank, banking rates and charges have been lowered with a resulting benefit to trade. But if Government wished by conferring special privileges on a selected bank to benefit trade, then in fairness to the established banks these benefits should have been made available to trade through all the banks with which the public had been accustomed to deal.

12. It may further be argued that banking services are given by the Imperial Bank to the state in exchange for the benefits conferred; yet every bank gives similar services to its numerous customers, besides paying interest on customers' balances.

13. To add to the enormously valuable benefits and privilege accruing to the Bank through the operation of the Imperial Bank Act the right of note issue, with the revenue from the securities protecting the fiduciary issue, or with the revenue from a direct payment, estimated without competitive tender, for control and management, would have the effect of erecting an unassailable banking monopoly in India.

14. The control of the note issue in the hands of a state bank, competing with other banks for general public patronage and banking business, would place banks in a position of dependence to the state bank and there would be the risk of bankers' needs in the matter of the issue and exchange of currency notes being made, particularly at the up-country offices of the Imperial Bank, secondary to the needs of the Imperial Bank's own non-banking customers.

15. No definite benefit would accrue to the community through the transfer of the control and management of the currency to the Imperial Bank of India. So long as proper reserves are laid down by statute to ensure convertibility and to ensure that the rupee will have a common monetary basis with the leading currencies of the world the question of a managed currency will not arise. There would be a distinct loss to the banking community if Government ceased to control the currency. The definite guarantee of impartiality, which the control and management of the currency by the Government of India provides, would be lost if these functions were transferred to a state-aided bank that is in active competition with other banks for general banking business. If it were decided that the note issue should be handed over to the Imperial Bank, then the status of the Imperial Bank should be analogous to that of the Bank of England, a state bank, which does not compete with other established banks in general banking business.

(a) Measures desirable to secure greater elasticity in meeting seasonal demands for currency and what conditions should be prescribed with regard to the issue of currency against hundis.

(b) Greater elasticity in meeting seasonal demands for currency can be expressed in other words as provision for increasing the amount of loanable capital at the busy seasons of the year.

16. The currency ought to have no concern with the provision of loanable capital. Assuming that an effective gold reserve for the note issue is established the volume of currency will increase and decrease with the gold withdrawals from or deposits in the gold reserve. This will be automatic following the seasonal demand for currency in India. Rupee exchange will move within the limits of the gold points, according

to the demand for rupees. Loanable capital to finance seasonal demands will flow to or from India through the agency of the gold reserve; the attraction of loanable capital to or from India being governed by the comparative profits yielded by the Indian or English bank rates.

17. The Imperial Bank rate should be regulated by the demand for money or, in other words, by the supply of loanable banking funds in India. Artificial measures for controlling the bank rate should not be resorted to. The bank rate ought to be the limiting and regulating agency controlling credit. Easy credit encourages over-trading leading in the end to financial crises. A high bank rate when seasonal demands are urgent is salutary. It keeps speculation within bounds, is a factor in preventing goods being held unduly for a rise in price, increases the velocity of the turnover of banking funds, and attracts local money to the money market. Money is available in India if the price is paid for it, and there is no more powerful agent for bringing hoards into fruitful employment than a good price for money.

18. There ought to be no question of emergency currency until an emergency has arisen, when, if panic conditions exist, the Government can take exceptional measures to suspend the Currency Act within strict limits and conditions.

19. Regarding the question of what conditions should be prescribed for the issue of currency against hundis I beg to state my opinion that the currency should not be asked to function as a re-discount market. It is a dangerous principle to admit that loanable capital can be manufactured by the issue of currency notes against the deposit of security. The supply of loanable capital is a banking function. If the local money market does not suffice to meet seasonal demands then additional supplies of loanable capital must be attracted from money markets outside India.

APPENDIX 79.

Statement of evidence submitted by Mr. M. M. S. Gubbay, C.S.I., C.I.E., General Manager and Director of the P. and O. Banking Corporation, Ltd., London.

This Note is submitted on the assumption that it is permissible to travel beyond the particular points covered by the Supplementary List of Questions, and is intended to concretise the points on which I should wish to tender myself for oral examination in addition to points covered by the Supplementary List.

1. The basic principles on which the plan appears to rest are:—

(1) The responsibility for the holding of exchange, whatever may be the point at which it may be stabilised, should not rest, as hitherto, on the authorities in Simla and London.

(2) Fluctuations of exchange should be left to be corrected automatically by the inflow and outflow of gold.

(3) For this purpose, as also as an internal circulating currency medium, a gold coin should be introduced.

(4) Indian Bank Rate policy will play an important part as a regulator to check or stimulate, as circumstances may require, the movements of gold in and out, and, therefore, the credit and exchange policy of India must be unified and be directed by the Imperial Bank.

2. One of the primary issues which emerge from any consideration of the Indian exchange system is the question of the Government participation in its management.

My view, as an old official of the Finance Department, is that the Government authorities themselves wish to see reduced to a minimum their responsibility and their intervention.

3. A complete change over, however, such as is contemplated in the plan, involves two radical changes in the Indian financial system:—

(1) the reduction of the status of the silver rupee;

(2) the alteration of the character of the present Government currency notes into bank notes payable in gold.

4. I do not consider that the effects of these two measures have had due weight given them in the proposed plan. The stages through which the scheme can be brought into ultimate complete introduction should be considered with reference to the practicability of these two measures. I do not believe that it is possible as yet to contemplate either of these two changes; singly each would have very far-reaching

consequences, and jointly they would result in general confusion and disturbance of the existing machinery.

5. A gold coin in internal circulation and commonly acceptable is an essential preliminary to the proposed reduction of the status of the silver rupee. It will be only when the necessary conditions of general acceptability of such a coin as an internal circulating medium that the stage of demonetising the silver rupee could be safely entered upon.

6. I feel very strongly that the replacement of Government currency notes by a bank note, whether payable in gold or silver, needs to be considered, not merely with reference to its acceptability as such, but also with reference to the different conditions under which a bank note will be available for issue. So long as the note is that of the Government and not of a bank, impartiality can generally be expected from those whose function it is to manage its issue, whether at local points or at the chief commercial centres. Suggestions have already been made of partiality under the system now obtaining at some inland points on occasions. It must be remembered that notes play a most important part in the movement of produce and goods from point to point.

A bank which has at its command the supply of notes available at any particular trading centre is naturally regarded as being likely to offer better service than another bank which does not enjoy this privilege. The utility of other banks to the trading and general community may be impaired, and their sphere of activities seriously curtailed, and it may be that there will be some reaction on the progress which the note-using habit has made among the community as a whole.

7. If the Government responsibility for the convertibility of the note is to be withdrawn, the acceptability of the bank note will need, in my view, to be secured by provisions as to a metallic proportion far higher than that proposed in the plan. The credit of the bank note can hardly rest on a metallic basis smaller than that which past experience has shown to be required in the case of the Government currency note.

8. The admissibility as fiduciary cover for the note issue, whether Government or bank note, of internal trade bills appears to me to be questionable. The primary objective should be to attract gold into the Indian currency, under whatever system it is to be operated, whenever Indian monetary requirements call for an increase in the currency. The rediscounting of internal trade bills by means of an enlargement, even temporary, of the currency will interpose an obstacle to such flow to India. Further, such rediscounting becomes all the more questionable when the trade bills to be offered as cover for the fiduciary issue are bills not rediscounted with the Imperial Bank or with the bank of issue by other banks, but may be bills purchased by the Imperial Bank in its character as a bank engaged in general commercial and joint stock banking.

9. Similarly, the provision as to the admissibility as fiduciary cover for the note issue of sterling bills drawn in India will, if it became operative, also interpose an obstacle to the flow of gold into India.

10. The plan lays upon the Imperial Bank the obligation to keep the Secretary of State supplied with funds to meet the sterling charges of Government.

As the custodian of the Government's balances and as holding bankers' balances the Imperial Bank has responsibilities as well as privileges; the discharge of these functions cannot always be impartially harmonised with its own interests as a bank engaged in joint stock banking, and commercial banking, as a branch bank and as a bank of deposit; and the privileges which it already possesses secures for it a favoured position. The extension of its functions so as to embrace (*a*) the management, as principals, of the note issue, and (*b*) the provision of the sterling requirements of the Indian Government will not only vastly increase its commitments, it will also increase the points at which its interests, as a private institution designed to make the best use of shareholders' capital, come into conflict with its duties as an impartial body conceived for the purpose, and charged with the duty, of regulating the supplies of credit in the general interests, and of stimulating under guidance and wise control the development of banking in India.

It would appear to be essential to define very clearly and rigidly the limitations which should be observed by the bank in the different capacities in which it will be required to function if room is to be made available for other banking enterprise in India. Preferably, these different functions should be differentiated, and their discharge left to be effected, not by one single institution, but by separate institutions or agencies.

APPENDIX 80.

Statement of evidence submitted by Dr. T. E. Gregory, D.Sc. (Econ.) Lond., Professor of Currency and Banking in the University of London.

The rupee should be stabilised and the gold standard adopted.

1. I believe that the time has now arrived when the stabilisation of the rupee can be safely undertaken. At the time of the Babington-Smith Commission, it was not held that the practical abolition of the gold standard in Europe stood in the way of fixing a parity with gold, and the case against a continuance of a fluctuating exchange is much greater now, when the greater part of the world has again stabilised the external value of the various currencies employed.

The time has also arrived, in my opinion, when India should adopt the gold standard, and not merely the gold exchange standard. I base my opinion upon the well-known fact that Indian public opinion has long demanded such a step, upon the consideration further that the failure of the experiment of 1920 has discredited the currency policy of the Indian Government; lastly, upon the feeling that the wider the area in which gold serves as a standard and the principal coin, the less the danger of a further fall in the value of the metal.

The rupee should be stabilised at the rate of 1s. 6d.

2. I attach no importance to the suggestion that the transition to the gold standard would involve a smaller demand for gold if a rate lower than the existing rate were adopted as the basis. This view seems founded on the erroneous idea that the total volume of the currency in India would be the same whether the parity were 1*s*. 6*d*. or 1*s*. 4*d*., or even a lower figure. If a rate lower than 1*s*. 6*d*. were chosen, the volume of money in India would have to be increased to prevent the sterling value of rupees from rising, and consequently money incomes would rise also. It makes no difference whether an individual buys 113 grains of gold with 13 rupees or with 15, if he is in the second case given a larger number of rupees to buy the gold with. It is true that a reduction in the gold or sterling value of the rupee would reduce the buying power of those classes of the population whose incomes are fixed in terms of money, by law or by custom, but I cannot admit that this would make much difference to the total demand for gold, or that, even if it did, it is a policy which ought to be advocated. I do not think that the serious social consequences which accompany a fall in the value of money are outweighed by the considerations that the adoption of an 1*s*. 6*d*. rupee gives an awkward relation to the £ sterling, or that it may have some slight effect in stimulating imports into India, or that on paper it gives a higher sterling yield to the holder of rupee securities. So long as gold only buys about ten-seventeenths of what it did before the war, the creditor of the Indian Government has very little to be jubilant about. In any case, against his gain must also be set the gain to India arising from the smaller rupee burden of the Home charges.

The question of gold output and prices.

3. I have no special technical knowledge of the economics of the gold-mining industry, which would enable me to give a categorical answer on the subject of the future output of gold. But the general economic aspects of the matter are clear enough. There is no reason to suppose that gold-mining differs from other mining, so that it is likely that the progress of mining technique will operate in the future, as it has in the past, to make the marginal mine one that in the past it would not have paid to work at all. This kind of influence on the output of gold one has every reason to expect, even if no new areas are opened up. Of course, if world prices were to fall, it would pay to operate mines even poorer than the present marginal ones. Thus, though it may be true, as Mr. Joseph Kitchin has argued,* that the tendency for gold output is to fall, yet the rate of decline may be slower than was anticipated. In any case, the fall in output which he predicted in 1924 has not yet begun to manifest itself, for his estimate of gold output for 1925 is higher than his estimate for 1924, viz. £81 millions against £79 millions.† Even if we take his original figures and argue that world production will fall in the next decade at the rate suggested by him, world-output would still be £74½ millions in 1930, and, on the assumption of a continuous fall at the same rate, £67 millions in 1940. If we

* Harvard Review of Economic Statistics, April 1924. "Gold Production: a Survey and Forecast."
† Figures from Messrs. Montagu's "Annual Bullion Letter."

assume that the Indian private demand will continue at the average pre-war rate (1908–13), i.e. 29 crores, say, at 1*s.* 6*d.* per rupee, £22 millions, and if we further assume that the transition to the gold standard were to start in 1930 and were to be completed in 1940, then India would absorb about three-sevenths of the current supply in the first year, and rather less than 50 per cent. in the last year.

The world's industrial consumption of gold is stated in the 1923 Report of the Director of the U.S.A. Mint as 87 million dollars in 1921 and 101 million dollars in 1922. If we take £20 millions as the average figure, then the Indian private demand plus Indian currency demand plus world industrial consumption would absorb $\frac{72}{95}$ and $\frac{52}{67}$ of the total output at the beginning and end of the transition period; the surplus available for the currency demands of other countries being then in absolute amounts about £23 millions and £15 millions respectively.

4. Any prediction as to how the future of prices will be affected by demands for gold of this order of magnitude in relation to the supply of gold as estimated is impossible, so long as we know nothing of the future reserves of gold which nations will think it worth while to keep. In this respect the war has brought about a currency revolution. Lehfeldt* and Cassel† have shown that in the 19th century the secular course of prices varied according as the actual output of gold rose or fell below the "required" output, i.e. the amount which would just have kept prices steady, world productivity being what it was. Both these writers agree that in pre-war years the actual output needed to be between 2 per cent. and 3 per cent. of the actual stock of gold in existence in order to keep prices steady. But currency conditions to-day have completely altered. Not only is little gold in circulation, but it is now recognised that the central banks of the world kept gold reserves much larger than they needed to keep in order to meet all demands likely to be made on them. The result was, of course, to keep up the value of gold.

The tendency in the post-war world is to keep smaller reserves, partly because central banks want as large a portion of their assets as possible to be earning assets, partly because the war showed that gold reserves were not the sinews of war that they had been supposed to be before the war broke out. Consequently a falling off in gold output does not necessarily have any direct effect on price levels at all in these days; banks reduce their reserve ratios a little, and that is all. Some banks have reserve ratios which are absurdly large, even now, and it is quite clear that it would pay, in the strictly economic sense, for the United States to exchange 500 millions of superfluous gold in the vaults of the Federal Reserve System for an interest-bearing debt contracted by India. Taking a world view, I cannot regard a demand for an extra £100 millions of gold on the part of India as likely to imperil the general stability of world credit in any way.

The position of the London money market.

5. Though it is, in my opinion, clear that the present and anticipated yearly output of gold, and the present monetary gold stock of the world, are quite large enough to support an additional demand of the kind suggested in the "Proposed Scheme," I feel also that the proposal to absorb as much as £50 millions within one year of the commencement of the plan would tend to create alarm in the London money market, and would to that extent cause opposition to the whole plan to be intensified. The gold in the Bank reserve can be taken at £23½ millions, the reserve ratio at 20 per cent. as compared with the pre-war 45 to 50 per cent. Under these circumstances, it can be argued that the inauguration of the scheme would involve grave risk of higher bank rates here, in order that the gold taken for India from bank reserves here would be attracted here again, either from South Africa, America, or other areas at present on a gold standard. The question whether such higher bank rates here would inaugurate a series of rising rates in the rest of the world depends on the extent to which other countries regard themselves as possessing surplus stocks of gold or not; if they were content to allow gold to move to London to replace that taken from thence, the influence of a higher bank rate would be directly confined to London, though it might have indirect effects elsewhere.

Under the actual circumstances of the London money market, a drain of gold to India would probably not have the effect, so much of raising rates over time, as of postponing their reduction. The position of London is complicated by the

* Lehfeldt. *Gold Prices and the Witwatersrand,* Chapter II. See *op. cit.* p. 37 for further references.
† Cassel. *Theory of Social Economy,* Vol. II., Sec. 53 et seq.

circumstance that the process of adjustment to the restored gold standard is still going on, and the market is thus peculiarly sensitive to losses of gold. The tendency of rates to fall when our own adjustment had been completed might thus be interfered with; but to the extent that the bank authorities can be induced to consider a lower reserve as not necessarily imperilling the position of London as a financial centre, an outflow of gold to India would not induce permanently higher rates. Whilst I regard it as very important that any acquisition of gold should be carried out in such a way as not to bring undue pressure to bear on the London market, both on economic and psychological grounds, I think it desirable to stress also the two following points in order to avoid misunderstanding:—

(*a*) A country cannot "lose" its gold against its own will. Gold can always be got at a price: the price to be paid is a price-level which will attract gold.

(*b*) The acquisition of gold in pursuance of a pre-determined plan is, in its reaction on the situation in the country from which the gold is drained, to be judged differently from losses of gold in that country due to lack of equilibrium of price-levels. For the latter indicates a disease which is peculiar to a particular area, which, unless cured, means continuous monetary derangements. The policy which must follow from the former situation depends on whether or not stocks, in the country from which gold is taken, are to be regarded as redundant or inadequate.

£100 *millions of gold not necessary.*

6. I do not, however, regard the amount of gold which will be required by India, in order to pass to the gold standard, as being necessarily anything like as large as the figure stated in the "Proposed Scheme." This opinion I reach on the following grounds:—

(*a*) The scheme is built up on the old-fashioned assumption that the correct way of inaugurating a gold standard is to acquire large supplies of gold and to exchange them for silver, which will then be sold at a loss, the extent of which it is impossible to estimate beforehand. This method of introducing the gold standard quite rightly foresees that it is impossible to maintain in circulation both the existing volumes of non-gold currency and the amount of new gold it is desired to introduce; and hence proposes to deal with the matter by reducing the legal tender quality of the silver coin. But the value of the silver rupee depends not on this, but on its quantity. I believe this method to be wrong in principle and likely to bring about the very evils it is desired to avoid.

(*b*) The introduction of the gold standard does not logically or practically involve the immediate circulation of large quantities of gold. What it does involve is the extension of the use of gold *in the future*, i.e. the opening of the Mints to gold, the grant of full legal tender power to gold and the maintenance at par with gold [though not the *immediate* right of conversion into gold*] of all other forms of currency. The correct device for passing over to the gold standard is thus *the limitation of the quantity of other forms of currency.* The normal growth of trade and population can then be relied upon to fill the gap caused by the non-increase in the other forms of currency, other than gold.

Provided that the quantity of silver is limited, there is no reason to limit the legal tender quality of the silver rupee, and every reason why it should not be limited.

(i) The knowledge that such silver as is actually hoarded will be deprived of its legal tender quality is surely the best means possible of causing a panic and of increasing the immediate supplies of gold which may have to be provided. This danger of panic demands is certainly increased by the suggestion in para. 2E (ii), that the putting into circulation of a gold coin in exchange for notes and rupees should be discretionary in the interim stage of the scheme. Whether or not the scheme is introduced by stages, on the lines suggested in the "Proposed Scheme" or on some other basis, both Government and the people of India should know in advance precisely what it is intended to do at any particular stage.

(ii) Assuming the scheme to be adopted, there seems considerable danger that the time required to carry it out will be increased owing to the pressure of interested parties, who will protest against the losses to them resulting from the fall in the price of silver. The experiences of Germany after the currency reforms of 1871–3 show how the fear of loss from the sale of large stocks of silver on the one hand, and the alarms of the silver party on the other hand, produce the very situation it is hoped

* That is, the date at which the Mints are opened to gold need not coincide with the date at which silver is made convertible into gold on demand.

to avoid: a panicky silver market and a postponement of the final stages of the reform. If the Government is to get rid of silver, let it do so as soon as possible and not disorganise the market for 10 years. I attach no very great importance to the argument that the annual sales would amount only to the "average net imports of silver into India in recent years." The net demand for silver in India will decline, mainly because if silver is regarded as likely to depreciate in value no one will want to hold large stocks of it. (I can see no virtue in the proposed import duty: the world price is bound to fall if large sales of silver take place, and though the Indian price may be somewhat above the world price, it too will be lower than it is now. If it is much above the world price, the duty will certainly encourage smuggling. The political consequences of the policy also seem to be undesirable.)

(iii) A further point may be alluded to here. India is a relatively poor country, in which the mass of ordinary transactions is likely to be for small amounts. On the other hand, technical conditions make the issue of small gold coins undesirable. The present rupee stock, including those in the currency reserve is only about 12 *per capita*. I suggest that this is not an amount which, provided that the total is not increased during the transition period, could possibly imperil the transition to the gold standard.

(iv) I notice a suggestion in para. 4 (i) in the Proposed Scheme which should be questioned. I refer to the sentence implying that during stage I "a statutory obligation should also be imposed on Government to give, in exchange for gold bullion, notes or silver at a price equivalent to the par of exchange, &c." There is no valid objection to be made if this sentence only implies that silver or notes will be issued against tender of gold within the limits of the existing issue; if it implies that the volume of notes or rupees is to be increased, it will delay and not assist the progress of the reform. For, so long as the rupee or the notes are not convertible at will, their value does not depend upon the nature of the security behind them, but upon the total quantity in circulation. To the extent that there are more rupees or rupee notes, to that extent, other things equal, will their value fall. As the object of the reform is to leave a gap in the circulation which can be filled by gold, silver or notes should only be given for gold within the limits of the actual existing circulation, so long as complete convertibility has not been introduced.

7. I am of opinion, therefore, that there should be no interference with the legal tender quality of the rupee. If the rupee remains unlimited legal tender, a reduction in the number in circulation is not necessary on any grounds, no heavy pressure on the world's money markets will then be felt and no danger to the progress of the reform will arise from the possible ill-effects of the sale of *very* large amounts of silver. The reduction in the number of rupees, in order to widen the area to be occupied by gold, should be confined to the sale of the rupees in the paper currency reserve. As, however, the smallest gold coin cannot be less than Rs. 10, and as it would probably be better to make the smallest gold coin twice as large as this, Government will always require some silver for the conversion on demand of the notes under Rs. 10. If no notes under Rs. 10 are issued, the place of silver in the circulation will be increased. The maximum sale of silver would thus be 90 crores, and it might in practice be a good deal less (see para. 9 below).

8. I come now to the transition to the gold standard. I recommend—

(*a*) That the Mints be immediately opened to the coinage of full-weight gold coins, in unlimited quantities. The minimum denomination to be Rs. 20 until the inauguration of the full gold standard, which I recommend should not be delayed for a period of more than five years from the date that the Mints are thrown open to the coinage of gold. The size of the smallest gold coin can then be reduced to Rs. 10, if it is considered desirable. The gold coins to be unlimited legal tender and a seignorage charge to cover cost of coinage to be imposed.

(*b*) That no further coinage of rupees or increase in the note-issue beyond the present limits be permitted in the interim period. If gold be tendered for notes, the total of the notes to remain unaltered, and a corresponding portion of the investments in the paper currency reserve to be cancelled.

(*c*) That of the 90 crores of rupees in the paper currency reserve such portion to be sold as is not required to take the place of notes under Rs. 10, the retirement of which I recommend, and a further amount which may be required to encash such Rs. 10 or other notes as may be presented for redemption before the expiration of the first five years of the scheme. On the inauguration of the convertibility of notes into gold, whilst some silver will probably still have to be held, the silver portion of the paper currency reserve to be reduced still further.

9. Estimating the amount of notes under Rs. 10 denomination as in the neighbourhood of 20 crores, this scheme involves a maximum sale of 70 crores, or, say, 50 crores within the next five years. The minimum amount of gold to be acquired will amount to 27 crores or £20½ millions sterling, or about £4 to £5 millions per annum. The sale of 50 crores of rupees will involve some 172 million ounces which, at the price estimated in the "Proposed Scheme," would bring in about £17 millions. The resulting deficiency should be made good either by a loan or by appropriations out of the gold standard reserve.

10. The Committee may care to consider the case for the immediate commencement of an Imperial Bank note issue. This could be done by transferring the gold in the paper currency reserve to the Imperial Bank, which would issue gold certificates therefor. Gold when presented for the first five years would be bought not with rupee notes but with gold certificates, a given increase in the Bank's issue of these to be accompanied by a proportionate reduction in the fiduciary note issue of the Paper Currency Department. Gold acquired by Government against the sale of silver similarly to be transferred to the Bank and the gold certificates to be held in the paper currency reserve instead of the gold itself. In this way, at the end of five years, the Imperial Bank would hold a minimum amount of gold equal to 57 crores against a total of 57 crores of gold certificates in the paper currency reserve. Assuming no gold to have been sold to the Bank for gold certificates except by Government, the Government note issue would still remain at 190 crores. If 10 crores of gold had been sold to the Bank the Paper Currency issue would stand at 180 crores, the Bank's gold certificates at 67 crores, of which 10 crores would be in circulation and 57 crores would be held by Government. This suggestion does not in any way alter the economics of the situation; it has the sentimental value that it would afford some proof that the transition from a Government to a Bank paper currency was under way. A special department of the Imperial Bank would have to be created, and the certificates would have to be at all times fully backed by the gold which they represented. Since gold coins would already be in circulation there is no reason why these certificates should not be convertible into gold on demand.

APPENDIX 81.

Statement of evidence submitted by Dr. Edwin Cannan, M.A., LL.D., Professor of Political Economy in the University of London.

1. *The interest of India.*

If (*a*) I felt complete confidence that the principles of the gold-exchange standard would always be properly carried out, and if (*b*) I disregarded the view of the question which is taken, rightly or wrongly, in India, I should see, so far as India's interest is concerned, very little difference between a gold-exchange standard and a gold-currency standard.

But neither of these conditions are fulfilled.

(*a*) Considering the history of the past and the probabilities of the future, I feel no confidence that the management of a gold-exchange standard will always be in the hands of persons willing and able to make it a success. Therefore, if I were myself an Indian, I should prefer the simpler gold-currency standard as being less likely to be broken down by bad management. I should not regard the fact that the gold-exchange standard, properly worked, is a little cheaper, as sufficient compensation for the extra risk involved in it.

(*b*) Opinion in India cannot be disregarded. So far as I can judge, the opinion of those who take any interest in the subject in India is overwhelmingly in favour of a gold-currency standard. Probably this is very largely a matter of national sentiment, the feeling being that Western nations adopted gold currencies in their own interests, and that India is prevented from following their example by the influence of London financial circles upon the British Government. To argue that India is too poor and backward to make good use of gold is very naturally regarded as adding insult to injury. It is extremely desirable in the general interests of India that a grievance of this kind should be removed at the earliest possible date, even if its removal costs an appreciable amount of money.

2. *The interest of Great Britain and the West generally.*

The interest of Great Britain and the West generally is that India should be prosperous and well satisfied, and to secure this Great Britain might well be

contented to incur some inconvenience, especially when the inconvenience would not be peculiar to herself, but would be shared by most of the Western countries. But it seems more likely that the gold-standard countries would be benefited than that they would be inconvenienced by the introduction of a gold-currency system in India.

The production of gold is likely to remain high for a considerable period yet. The European and American demand for additional gold for currency is not likely to be as great as before the war, since (*a*) people who have once become accustomed to paper currency do not wish to return to gold coins (e.g. California has not returned to the habit of using gold coins), and (*b*) the superstition that immense cellarfuls of eternally idle gold are necessary to "back" or "support" the value of paper currencies is, like other superstitions, losing strength. Consequently, if the East takes no more gold than before, there is great danger of a further depreciation of gold, and, which of course is the same thing, a further rise of prices in the gold-standard countries. It is true that rise of prices makes things temporarily easy for the business man who lives by profits, but all experience goes to show that it tends towards general unrest and the spread of revolutionary and destructive ideas, that it ruins government finance, and should be avoided like poison by every wise statesman.

Additional demand from the East, therefore, if on a moderate scale, is not to be feared, but to be welcomed by the gold-standard countries of the West.

3. *Smallness of the amount of gold required for a gold-currency standard.*

I see no ground for supposing that if complete liberty of exchanging all silver rupees and currency notes into gold coins were given at once all over India, there would be an enormous demand for gold coins, unless some ill-advised action had created distrust in the rupees and notes.

Small cash is a necessary of civilised life. The principal factor in determining how much per head of population will be required in the smaller coins is the magnitude of the coin or note immediately above them. In other words, the amount per head of silver coins in any country, where gold or notes are used for large payments, will be found to depend principally on the magnitude of the smallest gold coin or note. The silver coins in circulation in the United States amount to about $2\frac{3}{4}$ dollars per head; in England they are about double that amount, and the explanation obviously is to be found in the fact that the lowest note in England, ten shillings, is much bigger than the lowest note in the United States, one dollar.

The poorer the people, the larger the proportion of their total cash will be in coins of small value.

Taking these facts and everything else known to me into consideration, I find it difficult to believe that no more than Rs. 5 per head would be required for active circulation, even if the smallest gold coin were the half-sovereign and the existing amount of 5-rupee notes remained in circulation. If the smallest gold coin were a 10-rupee piece, which is quite small enough for a gold coin, the amount required would be still larger.

The impression that in case of the introduction of gold currency there would be a rush to convert silver coins into gold ones seems to be founded on a belief that a large proportion of the silver coin outstanding consists of hoards which have been saved and are not in very active circulation, and, further, that these hoards would to a large extent be brought out for conversion into gold. But, granting their existence, why should these hoards be converted? To bring them out would be inconvenient to the owners owing to the risk of publicity and robbery, and nothing would be gained by it except some saving of space, which is really quite negligible in the case of hoards already made. No doubt in future those hoards, if any, which would under existing circumstances be made in silver coin, would tend to be made in gold coin, but there seems very little reason to expect any appreciable conversion of existing hoards—provided, of course, as I stipulated at the beginning of this section, nothing were done to create distrust in the silver coins.

4. *Silver rupees should continue to be unlimited legal tender.*

Few things are more likely to create distrust in the silver coins and consequently lead to a wild rush for gold than an announcement that it is intended to enact that after a certain date they shall cease to be unlimited legal tender. An Englishman knows by experience that the limitation is of no practical importance, and has no fear, when he happens to have collected a hundred or even a thousand shillings, that those coins will not buy him as much as five pounds and fifty pounds in notes or sovereigns. But to an old Indian villager the news that he has got more silver rupees than his creditor need accept is likely to be most alarming. Prudence will suggest to him that he should at once take advantage of any possibility of converting his

silver into more reliable money. The proposal to limit the legal tenderability of silver rupees is most dangerous and should not be mentioned even as a remote possibility.

In limiting the legal tenderability of the silver rupee India would only slavishly copy a completely unessential and unimportant feature in the English system. Adam Smith suggested a limit for the English silver long before the true principle of token currency had been discovered, and he had nothing to say for his proposal except that it would prevent bankers on whom there was a run from endeavouring to gain time by paying in sixpences, and thus, he thought, induce them to be more careful to keep reserves adequate to meet a run. In 1816 his proposal was adopted, and since then the English silver currency has given little trouble, but this has not been in the least due to the legal tender limit of forty shillings. It is due to the fact that the executive Government, apparently by accident rather than by design, never carried out the intention of the Act of 1816, which was to establish free coinage of silver, subject to a seignorage.* The Mint was kept closed against coinage of silver for anyone except the Government itself, and the Government voluntarily limited the amount issued to what would circulate comfortably at par. Not understanding this, writers on currency and authors of economic text-books used to say that the value of the silver coins was maintained by the limitation of their legal tenderability—as if a disability could increase the value of anything! When this extraordinary doctrine was challenged, the only defence which could be thought of was to allege that the limitation prevented the silver currency being much increased (and therefore depreciated) by the operations of false coiners—as if there were the least probability of false coiners trying to pass nine bad half-crowns or forty-one shillings in a single payment! Mr. Ambedkar, in a book which in some respects is valuable ("Problem of the Rupee," p. 290) tries to revive the doctrine by suggesting that the limitation of legal tender prevents the Government itself from issuing too much token currency. But this is not true, since in transactions between the post office and its customers, and in paying dockyard and other weekly wages, the Government can easily pay out far more silver coins than it receives, and that without compelling anyone to take more than 40*s*. at a time. As a matter of fact, when Goschen was Chancellor of the Exchequer and wanted "to do something for silver," the Government did actually issue too much in that way, and was only stopped by the remonstrances of the banks, which objected to having their vaults crammed with silver coin which their customers had no need for.

It must not be forgotten, too, that the wildest advocate of a limitation of legal tender has never gone so far as to claim that it brings about a reduction of the silver currency when that is required in order to meet a diminution of demand. In a steady progressive state of things such a diminution is not likely to occur, and none seems to have been observed in Great Britain after 1816 till recently. Then it was found that the silver currency required a considerable reduction from the peak which it had reached during the war or the armistice period, and the Government had to withdraw no less than £7,000,000 from circulation and place it in reserve.

There are, of course, plenty of examples of silver currencies with unlimited legal tender power existing in gold-currency standard countries. The thalers in Germany after 1870 are an historical instance; the silver dollar in the United States is still, I think, unlimited legal tender.

5. *Silver rupees should, like notes, be convertible into gold coin.*

It is true that in Great Britain the Executive has maintained the value of the silver currency without being compelled to do so by Statute, and that in the United States the Executive has at some periods maintained it while the Legislature was doing its best to destroy the gold standard, but it seems desirable as a rule that the obligation to keep up the value of the silver by not issuing too much and by withdrawals when by any accident the amount has become excessive, should be definitely imposed upon Executive Governments. The best way to impose the obligation is by requiring the Government to convert the silver into gold coin on demand, as was done in the German monetary reorganisation of 1870.

I see no reason for supposing that India should be an exception from the rule.

6. *Cautious and gradual but rapid introduction of gold-currency standard.*

I submit the following as the steps by which the transition to a gold-currency standard could be made in India without any large risk at any point and at the same time with considerable rapidity, assuming, of course, that difficulty is not introduced by an attempt to combine the reform with a departure from the already established actual exchange market value in gold of the rupee :—

* The provision for free coinage of silver was not struck out of the law till the Coinage Act of 1870. If it had remained till the time of the bimetallic controversy, doubtless much more would have been heard of it.

(A) At once open the Mint to the free coinage of gold; the Mint to be bound to give (after a reasonable interval for time in manufacturing the coin) as much gold in coin as it received in bullion less a small charge for cost of manufacture.

(B) At the same time declare the new coins and equivalent old ones, if any, to be legal tender (unlimited) as rupees at the ratio fixed (e.g. if the 1*s.* 6*d.* exchange is the basis, sovereigns would be legal tender for 13⅓ rupees and a new 20-rupee coin would contain as much gold as a sovereign and a half).

(C) At the same time suspend all additional issues of silver coin, and stop all additional issues of notes redeemable in silver.

(D) Then make the notes convertible into gold coin at the option of the holder, but proceed by instalments, taking first the notes of largest denomination, and proceeding downwards, class by class, very rapidly if no demand appears at each stage, till all the notes are convertible into gold.

(E) Then apply the same method to the silver rupees, taking them in instalments, beginning with those of most recent date.

There seems every reason to believe that if this method were adopted without much flourish of trumpets, complete convertibility of silver coins and notes into gold coin could be introduced in the course of a single year without causing any appreciable demand for gold. The overwhelming majority of the people would not become aware that any change was going on, and those who knew about it would have no reason for taking any action. The maximum possible additional demand caused by each successive instalment would be exactly calculable before the instalment was taken in, the experience with the earlier instalments being available.

But though so unobtrusive and safe, the method would accomplish all that is required, and that very quickly, since India would be on a gold-currency standard from the moment when the 1,000-rupee notes gave their holders power to draw meltable and exportable gold.

Some time after the process described above was complete, increase of population might require the suspension of additional coinage of silver to be terminated. But to prevent any temptation to make a profit by over-issue, it might be well to provide that any profits obtained by additional issue should be realised in gold, and held in reserve to meet the possibility of a backward fluctuation necessitating a redemption of silver coin.

7. *Cost of the reform: magnitude of reserves, and their use.*

It may be asked, "If (as is argued above) little or none of the existing silver and note currency will be converted into gold coins, how will India have a gold currency?"

The answer is that she will have it in the same sense as the United States has it. Two years ago I travelled at my own expense in that country from Detroit to Los Angeles, and then to Washington and New York, without ever touching or seeing a gold coin, but nobody doubts that the United States is a gold-currency standard country. The fact that nobody there cares to carry about 5-dollar and 10-dollar gold coins does not prevent their being current coin which will satisfy any creditor's claim for dollars.

Probably, indeed, private persons in India would soon be holding more gold coins than private persons in the United States. At present most hoarding is said to be in the form of uncoined gold, and it would certainly appear likely that gold coins each of which was a definite number of rupees, would be preferred to bullion wherever no question of ornament or ostentation arises.

Moreover, the reserve against notes and (if any) against silver coins would be held entirely in gold. It is in the cost of the exchange into gold of the silver at present held that we are to look for the cost of the reform. If the reserve is to be kept up to its present nominal magnitude and the silver rupees in it can only be sold in the world bullion market for 9*d.* each (instead of at the rupee value of 1*s.* 6*d.*), this cost will amount to about £33 millions.

Whether this sum could safely be reduced by some cutting down of the proportion of the reserve, I do not profess to know. It must depend largely on Indian conditions with which I am not familiar. But I do protest strongly against any provision that the reserve shall not be allowed to fall below some stated ratio. Such a provision simply sterilises a quantity of gold, making it as useless as if it were still at the bottom of the mine from which it was extracted. A reserve should be usable down to the last penny. To say that in an emergency the law can be broken or suspended is no defence, since violent disturbance is caused by the agitation which ensues when the absolute limit is approached and it is still uncertain whether the law will be maintained in force or not.

APPENDIX 82.

Statement of evidence submitted by Mr. Joseph Kitchin, Manager and Director of the Union Corporation, Limited, London.

I.—GOLD.

THE RELATION BETWEEN THE WORLD'S DEMAND FOR GOLD AND ITS SUPPLY.

1. Table VII. gives the detail of the world's production from the record of 1915. It covers a period of 11 years during which the world has produced £868,500,000 of gold, of which £407,000,000, or 47 per cent., was contributed by the Transvaal. It is worth noting that of the £4,080,000,000, which, according to the records, has been produced since 1493, £2,025,000,000, or practically one-half, has been produced in the first quarter of the present century, as compared with £1,568,000,000 for the whole of the nineteenth century. In 1848-1875, Edward Suess has calculated, 88 per cent. of the output was derived from alluvial, while to-day its quota has fallen to 8 per cent., and banket—practically confined to the Rand—yields 50 per cent.

2. In reading the table it must be remembered that the Rand white miners' strike of January-March, 1922, reduced the output of that year by about £6,000,000, and so in a sense the year of lowest production since the record of 1915 was 1921, and not that which followed it. One can therefore say that, partly as a result of exhaustion of mines, but also as a result of the increased cost of working resulting from the Great War, the yearly production fell from £96,400,000 to £68,000,000, or 70½ per cent. of 1915, while it has since increased annually until it has reached £80,000,000, or 83 per cent. of 1915. In 1924—and again in 1925, by a narrow margin—the Transvaal improved upon its previous best, and Canada also achieved a record. Apart from these two, and probably Russia, the principal goldfields of the world were either stationary or declining, and there is distinct indication that, although the world's recovery has perhaps not yet spent itself, any further advance, if it takes place at all, will probably be on a more moderate scale than in late years.

3. The gold output for 1925-29 is assumed to vary little from the £80,000,000 of last year, and to be between £75,000,000 and £80,000,000 in 1930. Of this amount the Transvaal is credited with £35,000,000, and the rest of the world with £40,000,000 to £45,000,000. By the year mentioned Canada may reach £12,000,000 and Russia £5,000,000, while £9,000,000 is taken for the United States. For the five years to 1929 the world's production may be estimated at £395,000,000, of which 1925 has already contributed £80,000,000. There is at present no reason to assume any higher figure for the further period to 1935, when indeed it is expected to average less, and to total £360,000,000.

4. Table VII. also shows gold consumption annually for 1915-1925. The first four side-headings give the demand for gold for other than monetary purposes, and the difference as compared with the output of the year is the amount assumed to be added to the stock of gold money in the world, excluding India, China, and Egypt, which are regarded as hoarding countries, except so far as they may disgorge gold. The data for these three countries are the net gold imports (or net exports where the minus sign is employed) corrected to the normal or mint price of gold, plus the gold production of the first two. The figures for industrial arts apply to new gold only, and are based on the incomplete returns to the Bureau of the United States Mint with the writer's estimates for the gaps.

5. India's demand has varied in extraordinary degree. For some years that country was prevented by administrative action from absorbing the metal, and the high figures of recent years are doubtless due to its making up for lost time and also to over-stocking In 1924-25 its quota reached a record figure, and 1925-26 will show a sensible reduction, though it will still be high. It is assumed at £27,000,000, including its own production. In the table India's fiscal year to 31st March is taken because it is better to base the figures on the annual trade returns and also because there is a lag between output and import owing to gold taking one to two months in its journey from the place of birth to the place of virtual burial. If the calendar year were taken the figures would differ very widely

from those given, though they would naturally show the same average over a suffi ciently lengthy period of time. The alternative figures are £200,000 (ne exports) for 1919, £32,700,000 (net imports) for 1920, £10,300,000 (net exports in 1921, and £17,500,000, £24,900,000, £29,800,000, and £43,200,000 (all ne imports) for the succeeding four years to 1925. On this view of the matter Indi took more instead of less gold in 1925 as compared with 1924, but there is a present a distinct falling off, which the table better reflects.

6. The balance available for money was exceptionally low in 1924 as in 191 and, on the whole, there has been a distinct falling off, for taking the figures fro 1911 to 1925 for three years at a time they have been £133,000,000, £217,000,00 £126,000,000, £122,000,000, and £85,000,000, the second figure being doubtles exceptionally raised by reason of the War.

7. With regard to the demand to be set against new gold production, the firs column of Table I. shows that the requirements of the industrial arts up to th War continually expanded, except that they remained practically stationar during the 20 years to 1894, i.e., during the period of falling commodity price The amount in 1894 was £10,800,000, and thereafter it increased almost annuall until in 1913 it reached £27,300,000. For the 12 years since, owing to the Wa and its after-effects, it has averaged only £18,000,000, and for the last two yea has been about £16,000,000. Judging by the 1913 figure, there is evident much room for expansion, but for the five years to 1929 the writer takes it a £18,000,000 per annum only, while for five years further perhaps £22,000,00 could be set down. The Indian demand has also varied with the trend of com modity prices, the average of £5,900,000 per annum for the ten years to 1869 bein more than halved during the subsequent fall in commodity prices, but thereaft averaging £4.800,000, £6,200,000, £10,000,000, and £19,200,000 for the fou quinquennia to 1914-15. The five years to 1919-20, including 2½ years restriction of imports, showed £10,200,000 per annum and the following five year with free importation allowed, £20,600,000, the average for the ten years bein £15,400,000 per annum. The demand for the five years to 1929-30, with India monetary conditions unchanged, might be estimated at £120,000,000, of which t first year will probably have given £27,000,000, leaving £23,000,000 per annu for the last four years of the period. The following five years might requi £110,000,000. China's demand is fickle, but less so than in the case of silve It has taken £11,500,000 in a single year (1919), but at other times disgorges gol There are indications that China's preference later on will be for gold, whic would be in the natural course of events. But this tendency may not be pronounc in the coming 10 years, and its demand may be set down moderately at £2,000,0 per annum for the five years to 1929, and at £3,000,000 for the following fi years.

8. The figures suggested are as follows :—

	5 *years to* 1929.	5 *years to* 1934.
	£	£
Industrial Arts (America and Europe)	90,000,000	110,000,000
India	120,000,000	110,000,000
China	10,000,000	15,000,000
Total demand	220,000,000	235,000,000
Assumed gold production	395,000,000	360,000,000
Balance available as money	175,000,000	125,000,000
,, ,, rate per annum ...	35,000,000	25,000,000
Stock of Gold Money at end of period	2,275,000,000	2,400,000,000
,, ,, ,, per head ...	272*d*.	272*d*.

9. Other observers might vary these estimates—and in both directions—a fulfilment may, and must be expected to, differ from them to a more or le important extent. But however they may be varied, they would not material alter the general result—that the balance available as money in the ten years mu be expected to be much below the £54,600,000 and £49,400,000 per annum of t two quinquennia to 1914, while the needs of the world will be much larger th then.

10. In the past there have been fairly well-defined periods—which can natu ally be varied by a few years, according to the taste of the observer—in which t stock of gold money per head has alternately risen not at all or but slowly and th

advanced with marked rapidity. Such periods with their figures are as follows, the compound rate of increase applying to the "aggregate" and not the "per head" column :—

—	World's Stock of Gold Money. Aggregate.	Per Head.	Interval.	Average Annual Increase.	Compound rate of increase per annum.	Governing general factors in the period of	Trend of economic factors.
	£	d.		£			
1807 ...	160,000,000	54					
			40 yrs.	1,200,000	0·6%	1810–1851	Stationary or falling.
1847 ...	207,000,000	50					
			21 yrs.	15,400,000	4·6%	1851–1873	Rising.
1868 ...	531,000,000	109					
			23 yrs.	8,500,000	1·4%	1873–1895	Stationary or falling.
1891 ...	733,000,000	122					
			27 yrs.	43,900,000	3·6%	1895–1920	Rising.
1918 ...	1,917,000,000	254					
				?30,200,000	?1·4%	1920– ?	Stationary or falling.
1934 ...	?2,400,000,000	?272					

11. In the two periods 1810-1851 and 1873-1895, following with a lag of a few years the periods of comparatively stationary gold money, London Bankers' Clearings, U.K. foreign trade, U.K. incomes, and U.K. wages were stationary and the Bank Rate fell; while in the two periods 1851-1873 and 1895-1920, when gold money was rapidly increasing in amount, Bankers' Clearings, foreign trade, incomes, and wages advanced swiftly and commodity prices and the interest rate rose markedly. Of course, the Great War and its after-effects exaggerated the rise, but it would, on a more moderate scale than now appears, still have been there, and 1920 would still have been the turning-point. That year, the writer believes from the evidence of the figures, commenced another period of stationary or falling factors the end of which cannot yet be foreseen, which would normally last, with a world working on the gold standard as before the War, until such time as the difference between the output and the demand for gold again permitted of a rapid increase in gold money per capita. This difference can be obtained only in two ways, i.e., by increased supply or lessened demand, or both—by new gold discoveries such as those of California and Australia or of the Rand, or by the industrial arts, India, and China moderating their requirements. All that can be said on that subject at present is that there is no indication at present of new gold discoveries of importance; that the industrial arts as time goes on and with a normal world are likely to exact a greater toll, as the pre-War figures and rate of increase suggest; that India's demand prior to the War was growing rapidly; and that China, which is passing from the copper to the silver stage, should in time with increasing wealth progress towards the gold stage, as India has done before it.

12. These remarks are made largely from the pre-War point of view, and as though the War had changed nothing. Hence the importance of the qualification "with a world working on the gold standard as before the War." The War has for the time being altered the position, so that, although the return to the previous form of gold standard is proceeding, only the United States, Mexico, and the Union of South Africa have a full gold standard, and in the world generally—even in those countries—there is a tendency to centralise gold money as much as possible, so as to make it more effective. How far these efforts will tend to increase the influence of a proportionately reduced amount of gold money remains to be seen.

Increase of Gold Needed to Keep Pace with Economic Development.

13. Professor Gustav Cassel has argued that the gold supply is representative of all money, and that by comparing the increase in that supply between years at which commodity prices were at the same level one can arrive at the rate of increase necessary to meet the general economic development of the world and to keep prices stable. In his work on "The Theory of Social Economy," English edition, 1923, he says: "The quantity of money is not rigorously marked off in relation to the total supply of gold. On the contrary, the gold passes from the non-monetary supply to the monetary and back. . . . Thus the monetary supply of gold at the time affords no objective cause for determining the value of money. To trace the general level of prices to objective causes is, in

fact, only possible when this general level is brought into connection with the total supply of gold." He then points out that bank-notes and bank deposits and the rapidity of circulation of these and of money have to be taken into consideration; that if rapidity of circulation or paying capacity in the period per unit is assumed to be unchanged, there are three variables, i.e., the quantity of money, the circulation of notes and the amount of deposits; that these variables are not entirely independent since "the amount of the notes and deposits is commonly regulated, given a certain quantity of money, by the terms on which banks make advances"; that "the determination of the general level of prices might be traced to two factors, i.e., the terms of bank advances and the quantity of money in circulation"; that "since under a gold standard the amount of money in circulation is . . . related to the total quantity of gold . . . fluctuations of the general level of prices are, if the real exchange is not altered, determined by the total quantity of gold and the terms of the bank advances as well as the effectiveness of the media of payment"; and after showing that the latter are not independent variables he comes to the conclusion that "the general level of prices is directly proportional to the total quantity of gold." (Pages 428-430.)

14. Consequently "when we take the gold standard into consideration (we) cannot stop at the quantity of money, but must go on to the whole quantity of gold in the world." The entire supply he takes at £490,000,000, £1,410,000,000, and £2,550,000,000 at the end of 1850, 1890, and 1910, respectively. He selects Sauerbeck's Commodity Price Index as being the best index available of world conditions, since it is carried back over a very long period and England is a Free Trade country. The level of Sauerbeck's Wholesale Prices of Commodities was the same in 1850, 1886, and 1910, and in the periods 1850-1910, as well as in 1850-1886 and 1886-1910 there was an average annual rise of 2·79 per cent. in the actual gold supply. "The increase of the gold supply during that period as a whole has clearly had no influence on the general level of prices, and the increase merely corresponds with the increase of the gold supply necessitated by the general economic development." (Pages 441-444.) The increase of 2·8 per cent. per annum "we may call a *normal* increase for the period in question and the gold supply at any particular point of time in the period, assuming a normal increase, may be called the *normal gold supply*," which he builds up by starting with £490,000,000 in 1850 and building forwards and backwards on a uniform annual increase of 2·8 per cent. "As far as the changes in the general level of prices in the period 1850-1910 may be generally traced to changes in the gold supply, they may be ascribed entirely to the divergence of the actual gold supply from the normal." (Pages 444 and 445.)

15. He gives on page 448 a rather remarkable diagram showing the approximate agreement between Sauerbeck's price index and the "relative gold supply" (ratio of the effective and the normal gold supply). "The main cause of the secular variations of the general price level lies in the changes of the relative gold supply, and the quantity theory is right to the extent that the general price level, though it is also influenced by other factors, is directly proportional to the relative supply. . . . The general price-level is also subject to annual variations, but these have no connection with the gold supply." (Page 447.) According to Lexis, a total yearly loss of the total supply of 0·2 per cent. must be assumed (as is done in Professor Cassel's figures) for the loss from wear, and so "an annual production of 3 per cent. of the supply at any time is a condition for the maintenance of the general price level unchanged, as far as the gold supply is concerned." (Pages 442 and 451.)

16. These results "refer mainly to the period 1850-1910 and the evolution of the world demand for gold during that period. To apply these results to the future is only possible on the assumption that the demand develops as it has done during the period in question. But we must point out that it is possible that the experiences of the Great War may materially modify our idea of the importance of gold, especially as regards its circulation and the great central reserves, and that in consequence of changes in the demand on this account there may be appreciable changes in the value of gold and the general level of prices." (Page 454.)

17. In distinguishing between secular variations and annual variations (which may also be called fundamental movements, or trend, and trade cycle movements, respectively), he attributes the main cause of secular variations to the changes in gold supplies, the annual variations having no connection with

gold supplies. Professor Cassel's conclusions are shared by many economists and are in essence identical with those indicated by the writer in his Trade Cycles Chart (a recent edition of which was published in the Annual Financial and Commercial Review of "The Times" of February 10, 1925) and in various published articles.

18. Professor Cassel's method of arriving at the annual increase in gold supplies required to meet the general economic development of the world and to keep prices stable is undoubtedly right, but the writer considers that it could be applied to more appropriate figures.

19. The Professor suggests that the quantity of gold money cannot be rigorously marked off from the total supply of gold, for gold passes from the non-monetary to monetary uses and back again. But there is a constant absorption of new gold by industrial arts every year in addition to the old gold re-used, and India's absorption, with only a very few unimportant exceptions (£800,000 in 1878, £2.200,000 in 1892, and £1,800,000 in 1894), is constant, as is plainly shown in Table I. Prices should, accordingly, be affected not by monetary and non-monetary gold together but by gold money only. Professor Cassel might, possibly, have worked out his thesis on the basis of gold money only if he had known of continuous statistics calculated annually and covering the necessary period. Such exist, mainly in unpublished form, in the writer's annual figures of the World's Stock of Gold Money (excluding India, China, and Egypt), which run back to 1839.

20. The writer's figures differ from other estimates in that the Stock of Gold Money is assumed to be added to each year by the amount of the world's gold production after deducting the absorption in the industrial arts of Europe and America and the absorption of India, China, and Egypt. The figures do not allow for wear and tear. This is considered to be negligible, since Professor Jevons, in the middle of the nineteenth century, showed it to be 0·0457 per cent. per annum for circulating coins only, while before the War money in circulation was one-third of the whole. The calculations start with an assumed £200,000,000 in 1843, and though their base is so distant in time, they have so far met the necessary tests very fairly. The totals at five yearly intervals are given in Table I, which shows how the Stock has been built up. Other estimates, which have sometimes varied widely in the past and which are largely of a non-continuous character, have been generally based on the visible stock of the moment in the banks and public treasuries of the principal countries, with an estimate of the gold in circulation. The following shows the correspondence between some of these estimates and those of the writer :—

—		Estimate.*	The writer.	Difference.
		£	£	
1848.	? Soetbeer	120,000,000	210,000,000	+ 67%
1873.	U.S. Mint (very incomplete) ...	249,000,000	586,000,000	+ 135%
1890.	Suess	665,000,000	720,000,000	+ 8%
1894.	"Wall Street Journal"	860,000,000	802,000,000	− 7%
1899.	U.S. Mint	948,000,000	958,000,000	+ 1%
1904.	"Wall Street Journal"	1,270,000,000	1,239,000,000	− 2%
1910.	U.S. Mint	1,438,000,000	1,454,000,000	+ 1%
1913.	Federal Reserve Board Bulletin ...	1,598,000,000	1,587,000,000	− 1%
1924.	U.S. Mint (incomplete)	1,950,000,000	2,100,000,000	+ 8%

21. The writer's own attempts to check the totals by observation made on the same lines as those adopted in the other estimates resulted in the 1913 and 1924 figures given in Table V, the 1913 amount checking within about 1 per cent. The figures *per capita* for the World's Stock of Gold Money, shown in Table I, are based on the total population of the world (duly computed by the writer for the purpose on the basis of censuses and estimates), including the population of India and China. They should, perhaps, be based on the population of the gold-money-using countries only, but this would involve too much labour, would result in jerks, and would be open to more errors of judgment. The figures *per capita* form an index of the growing Stock of Gold Money after allowing for increase of population.

* Excluding India, China and Egypt, where they are specified, in order to make the comparison fairer.

22. Following Professor Cassel's method the writer has taken years when commodity prices (Sauerbeck—"Statist" index) were at the same level and compared them with the increasing Stock of Gold Money. These years are not quite the same as those selected by the Professor, but consist of two sets—1851-1884-1907 when the index on a three-years (centred) average was 77 on each occasion (90 on the basis of 1913 = 100) and 1844-1880-1913 when the index similarly averaged, was 85 (100 on the basis of 1913 = 100). The periods covered are 56 years in the first case, and 69 years in the second. The results fitted to the Stock of Gold Money curve are :—

(*Increases per cent. per annum, compound.*)

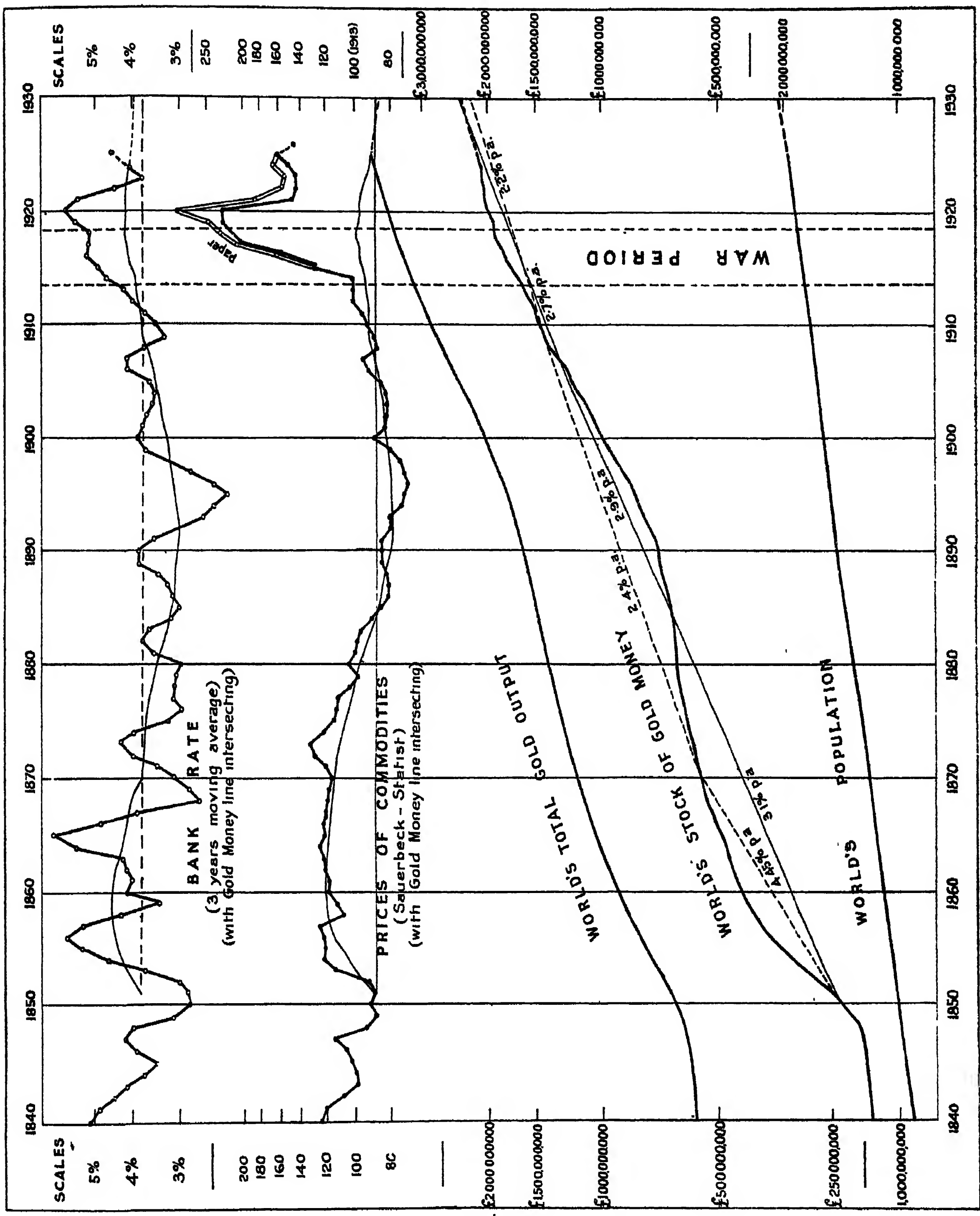
——	1851–1884 (33 years).	1884–1907 (23 years).	1851–1907 (56 years).	1844–1880 (36 years).	1880–1913 (33 years).	1844–1913 (69 years).
Stock of Gold Money	3·09	2·91	3·03	3·29	2·76	3·04
World's population...	0·85	0·83	0·85	0·84	0·87	0·85
Difference	2·24	2·08	2·18	2·45	1·89	2·19

23. How far the advance in the Stock of Gold Money exceeded the growth of population is indicated in the table. The Stock of Gold Money rate of increase shows a certain amount of slowing down, and this is just what one would expect if Gold Money has increased in efficiency with time, as is no doubt the case. The rates given are not those of the economic development of the world, but the increases in Gold Money necessary to maintain that rate of development. If adequate statistics of world economic factors were available they would doubtless show higher percentage increases than shown, and as an example the world's pig-iron output (not a money factor) increased 4·59 per cent. and 4·92 per cent. for the two sections of the period 1851-1907 and 4·76 per cent. and 4·23 per cent. for the two sections of the period 1844-1913.

24. The attached chart is drawn on a uniform logarithmic or ratio scale so as to give equal rates of increase precisely the same slope and to enable the various curves to be directly compared. It gives the growing Stock of Gold Money, showing clearly the impetus given by the Californian and Australian discoveries of 1848-1851 and by the discovery of the Rand in 1886, together with the slackening off which subsequently occurred in each case. The straight lines joining portions of this curve indicate that the rates of increase were different at different times (and it would, of course, show other differences if other portions of the curve were taken instead). The chart also gives the Sauerbeck—"Statist" index of Wholesale Prices of Commodities and the Bank of England Rate for Discount. The latter is given on a three-years moving average to partly remove the often violent annual variations, which are recorded in the writer's "Trade Cycles Chart." Through the Commodity Price curve and also through that of the Bank Rate are drawn lines showing the Stock of Gold Money for direct comparison. In drawing such curves it has naturally been necessary to appropriately slope the Stock of Gold Money curve so as to make it move about a horizontal level, and this has been done by drawing such lines as much above or below the horizontal base chosen as the Stock of Gold Money curve is above or below straight lines (shown on the chart) drawn between 1851-1884, 1884-1907 and 1907-1928 in the case of Commodity Prices, and between 1851-1870, 1870-1909 and 1909-1932 in the case of the Bank Rate, i.e., between years when Prices and the Bank Rate (nine years' average) respectively stood at the same level, except for the current periods, for which a drop of 0·2 per cent. per annum on the previous rate of increase is assumed as a result of the previous figures. The fit between Prices and the Stock of Gold Money is as good as could be expected, the variations shown by Prices from the comparison line being mainly those due to the trade cycle variations which are superimposed on the fundamental movements or trend produced by the varying Stock of Gold Money. In the case of the Bank Rate the fit is as good, and the trade cycle fluctuations swing the curve almost equally from side to side of the Gold Money line. The writer's attempt to carry back to 1800 the correspondence between the total gold supply and Prices of Commodities has met with very indifferent results.

25. The curves are continued into the future, but in view of the after-influences of the War, the result must be subject to a number of uncertainties, such especially as the doubt as to the period when "normality" in employment, pro-

GOLD MONEY, PRICES AND THE BANK RATE.



JOSEPH KITCHIN

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duction, trade and commerce will be reached, and the speed and nature of the return to the gold standard after its abandonment during the War by every country except the United States of America. On the chart the stock of gold money has been extended from 1924 to 1930 on the basis indicated in the previous section of this statement, and the corresponding money lines have been extended through the commodity prices and Bank Rate curves from 1907 and 1909 respectively to 1930 on the method already mentioned.

26. The first point to be noticed is the character of the stock of gold money curve, which rose strongly from 1849 to 1861, while between 1861 to 1918 the rate of increase was sensibly lessened, and from 1891 to 1918 the rise was again prominent. During these periods (subject to a lag of some years) prices of commodities and the Bank Rate rose, fell and rose respectively as regards their general trend, and there is no doubt that, but for the War, the general advance in prices and the Bank Rate which commenced about 1896 would have lasted until about 1920. Since 1918 the rate of increase in the gold money stock has sensibly lessened as it did in the period 1861-1891 and this state of affairs seems likely to continue for some years to come, so that at any rate for another ten years to come there should (apart from the War) have been an appreciable fall in prices and a decline to a small extent in the average Bank Rate. Allowing for a lag in the operation of the influence of the stock of gold money, and assuming that the chart has been correctly drawn, prices should have risen (on the basis of 1913 = 100) from 80 to 1896 to 100 at 1920 and then should have fallen to 90 at 1930 and 85 at 1935; and the Bank Rate, after rising from the neighbourhood of 3 per cent. at 1895 to the neighbourhood of 4 per cent. at 1920, should have remained more or less at that level afterwards, considering, of course, only the matter of trend and not trade cycle variations.

27. That prices will actually reach an index of 90 by 1930 is too much to expect, as the influence of the War will not have ceased by then or probably for some time afterwards, but already they have dropped from the high level of 230 (gold) for 1919-1920 to about 140 in 1922-1923 with a recovery to 158 for 1925, while the present figure is 148. It would seem evident from a study of the chart that they may go a considerable way towards 90 in the next few years. Generally it seems that unless strict economy in the use of gold is exercised, the trend of prices must be downward for a long time to come. The Bank Rate should apparently oscillate about 4 per cent. with, if anything, a declining tendency.

28. As previously shown, Professor Cassel applies his required annual rate of increase of 2·8 per cent. to the aggregate gold production, and at the Brussels Conference of 1920 he gave £100,000,000 as the annual gold production then necessary to meet the economic development of the world and maintain the stability of prices. The amount increases of course annually at 2·8 per cent. compound interest and the £100,000,000 needed in 1920 would become £132,000,000 per annum in 1930 and £174,000,000 in 1940. These figures compare with an annual gold production which is at present £80,000,000 per annum, has never exceeded £96,400,000, and has averaged £74,000,000 for the last eight years.

29. Using the different figures of the present statement, and in view of the rate of increase in the stock of gold money having been 3·09 per cent. per annum in the period 1851-1884 and falling to 2·91 per cent. in 1884-1907 owing to the increasing efficiency of gold money, the rate of increase at present applicable may be taken at the 2·7 per cent. rate already suggested. In 1907, the stock of gold money was £1,289,000,000, and the following compares the amount at which this should increase to keep pace with the world's economic development with the actual or anticipated stock :—

——	Stock required.	Actual Stock.	Difference.	For five year periods. Increase in Stock required.	Increase in Actual Stock.	Difference.
	£	£	£	£	£	£
1910 ...	1,393,000,000	1,454,000,000	+ 61,000,000	—	—	—
1915 ...	1,592,000,000	1,736,000,000	+144,000,000	199,000,000	282,000,000	+ 83,000,000
1920 ...	1,819,000,000	1,977,000,000	+158,000,000	227,000,000	241,000,000	+ 14,000,000
1925 ...	2,079,000,000	2,137,000,000	+ 58,000,000	260,000,000	160,000,000	—100,000,000
1930 ...	2,377,000,000	*2,305,000,000	— 72,000,000	298,000,000	*168,000,000	—130,000,000
1935 ...	2,717,000,000	*2,425,000,000	—292,000,000	340,000,000	*120,000,000	—220,000,000

* As estimated.

The position speaks for itself. During the 10 years 1926-35 an average of £64,000,000 per annum of addition to the gold money stock is required, and the estimate, based on the Indian monetary system as at present, falls short of this by about 55 per cent. The past five years have added an average of £32,000,000 per annum, and the estimate for the next ten years suggests an average rather less than this. It is evident that great economy in the use of gold, both in regard to its use as a commodity and in respect of its use as money, is very necessary. Unless that economy is exercised we have to look forward to a prolonged period of steadily falling commodity prices and of a diminishing degree of prosperity and economic development throughout the civilised world, including India.

30. The amount of gold required to keep pace with the economic progress of Great Britain cannot be sharply distinguished from that required for the world. What affects one will affect the other, and commodity prices are to a large extent world prices.

II.—SILVER.

The Effect of the Price of Silver on the Production of the Metal.

31. There are striking contrasts in the manner of occurrence and winning of gold and silver, which (from an economic point of view) may be summarised thus :—

Gold.	*Silver.*
Almost always native (chemically free). Usually associated with sulphides, &c., of other metals.	Always chemically combined with sulphur and other elements, except when it occurs native in oxidised deposits near the surface.
Largely found in alluvial, in banket and in lodes.	Never (practically) found in alluvial or in banket, and almost entirely in lodes and other non-alluvial ore bodies.
Mostly won for itself alone.	Largely won with other metals, often as a bye-product.
Subject to sudden increases of output owing to alluvial discoveries and such discoveries as that of the Rand.	Not being found in alluvial, there is less liability to sudden increase. Cobalt was exceptional, and its production has already fallen to about one-third of the maximum of 1911.
British Empire produces 70 per cent. of world's output.	British Empire produces 15 per cent. of world's output.
America (including Canada) produces 30 per cent. of world's output.	America (including Canada) produces 85 per cent. of world's output.
Output at its highest (1915) 196 per cent. above 1893.	Output at its highest (1923) 50 per cent. above 1893.
Output for 1925 147 per cent. above 1893.	Output for 1925 42 per cent. above 1893.

Silver being largely won in association with other metals, it becomes desirable for the purpose of this enquiry to ascertain how far it is won for its own sake and how far as an accessory or bye-product. Official figures are obtainable only in respect of the United States and Canada, which represent about 35 per cent. of the production, and in the case of the United States it is not possible to separate between silver or silver-gold ores where silver is the more valuable metal and gold-silver ores where the gold contents are the more valuable. Even were it possible it must be realised that it is difficult to draw a dividing line between the two classes, for one shades insensibly into the other. Where silver is won in conjunction with base metals—copper, lead, zinc, and (in Bolivia) tin—it can be sharply separated because such ores are always smelted, while where silver and gold alone are won—from so-called dry siliceous ores—quartz mills, usually with some chemical treatment, are almost exclusively employed, save for exceptionally high-grade ore which may be sent to smelters. In the case of Mexico, which is as important a producer as the United States and Canada combined, the necessary data for making a separation between the various classes cannot be obtained from official statistics, it has to be largely guessed.

32. As regards the United States the proportions of silver obtained from dry siliceous ores and from base metal ores, according to the United States Geological Survey, were 27·8 per cent. and 72·2 per cent. respectively in 1900, 24·9 per cent. and 75·1 per cent. in 1905, 40·4 per cent. and 59·6 per cent. in 1910, and 39·5 per cent. and 60·5 per cent. in 1913, while in 1924 they were 31·9 per cent. and 68·1 per cent. But it is better to observe the quantities rather than these percentages, and then it is found that, from 1900 to 1924, except during the years around the end of the war, the output from base metal ores was steady throughout at between 41,000,000 and 45,000,000 fine ozs. per annum, any variation in the country's total production, which during that period moved between 52,000,000 and 75,000,000 fine ozs., being traceable to dry siliceous ores. This steadiness and lack of increase in the output of silver from base metal ores is the more remarkable because the United States production of copper, zinc, and lead has increased from two to four and a half times since 1900. Such a result is doubtless due partly to some of the more important copper mines carrying little or no silver and partly to the proportion of silver in the base metal ores decreasing with time.

33. Taking the year 1924, one may venture on the following estimate of the origin of the world's silver output. "Silver ores" in the table are to be considered as those containing either silver alone or more usually silver and gold ores where the silver constituent is the most important in value (i.e., ores which are won mainly for the sake of their silver content), "gold ores" are those containing gold and silver where the value of the former metal preponderates (i.e., ores won mainly for the sake of their gold content), and "base metal ores" are those where copper, lead, zinc, and tin or one or more of them are associated with silver and gold, and where the value of the base metals preponderates. Often, of course, silver or gold ores contain base metals, but in quantity insufficient to justify smelting, and in such case they are treated in quartz mills for their content of precious metals only, and are then classed as "silver ores" or "gold ores." In Mexico a large proportion of the smelter production—the writer takes it at as much as 20,000,000 ozs.—comes from material high in silver and low in lead or copper, and this is accordingly classed among "silver ores" :—

—	Dry siliceous ores.			Total annual production.
	Silver ores.	Gold ores.	Base metal ores.	
	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.
Mexico	50,000,000 = 54%	6,000,000 = 7%	36,000,000 = 39%	92,000,000
United States ...	19,000,000 = 29%	2,000,000 = 3%	44,000,000 = 68%	65,000,000
Canada	12,000,000 = 60%	3,000,000 = 15%	5,000,000 = 25%	20,000,000
Central and South America	6,000,000 = 21%	—	23,000,000 = 79%	29,000,000
Oceania	—	1,000,000 = 9%	10,000,000 = 91%	11,000,000
Asia	1,000,000 = 9%	1,000,000 = 9%	9,000,000 = 82%	11,000,000
Europe	—	2,000,000 = 22%	7,000,000 = 78%	9,000,000
Africa	—	2,000,000 = 100%	—	2,000,000
	88,000,000 = 37%	17,000,000 = 7%	134,000,000 = 56%	239,000,000

The figures are uncertain, as may be gathered by comparison with other estimates :—

? Author (1887) ...	56,500,000 = 56½%	500,000 = ½%	43,000,000 = 43%	100,000,000
Carpenter and Cullis* (on 1912).	46,000,000 = 20%	35,000,000 = 15%	152,000,000 = 65%	233,000,000
Above (on 1924) ...	88,000,000 = 37%	17,000,000 = 7%	134,000,000 = 56%	239,000,000

* "Report on the World's Production of Silver" to the Indian Currency Committee of 1919. Ounces added.

34. The estimate now made indicates that to the extent of about two-thirds of the output silver is not won for its sake alone, but either as a bye-product or in conjunction with gold. If a substantial fall in the price of silver were to take place any consequent curtailment of the output would hardly affect the base metal product at all, would have more but still little influence on the production from gold ores, and would have its chief effect on silver ores, i.e., upon 37 per cent. of the silver production. Even here the effect would be smaller than might at first sight be expected, because, in cases where the profit is sufficiently large to leave a favourable balance at the lower price level, production would continue, and might even

be stimulated in the attempt to maintain the aggregate profit, and in cases where the profit was wiped out the mines would struggle to continue their production as long as possible. The latter remark applies to existing mines, but, of course, the reduction in price would tend to strongly discourage the opening up of new ones. It must also be remembered that mining is not subject to the usual rules by reason of the glamour associated with it, so that a mine is usually not shut down when it becomes unprofitable to work it until necessity, in the shape of refusal to keep up the supply of further funds, compels cessation of operations.

35. During the period since 1890 the output, averaged over periods of seven to ten years, has been steady at about 0·11 fine oz. per head of the world's population, while from 1871 to 1917—when the price of silver varied extremely—the aggregate value of the annual production moved only between 3·2*d*. and 3·7*d*. per head.

36. From 1835 to a few years before the War the curves of the production and the price were complementary (i.e., moved oppositely in relation to each other) to a remarkable degree, a steady or slightly rising output accompanying a steady price, whether at 65*d*. or 30*d*. per fine oz., while the great advance in production from 1874 to 1893 accompanied the slump from the higher level to the lower. In recent years (1919-1922) in the United States, with $1 per fine oz. or more paid for domestic silver, the output of the United States was the lowest since 1910, at an average of 55,000,000 oz. per annum. Thus there are indications that a high output is consistent with a low price and a low output with a high price. In the years 1917-1920, when the London quotation of silver was exceptionally exaggerated, the output was 17½ per cent. below the level of 1910-1912, and since, with a lower quotation, it has advanced beyond the pre-war level.

37. While there was a very heavy fall in price down to the 38·6*d*. per fine oz. of 1893, the relapse after that date to 26·0*d*. in 1902 could be calculated to be hardly less severe in its effect on the margin of mining profits, but for the whole of this interval and for four years thereafter—i.e., 14 years in all—the world's production kept remarkably steady, the annual amounts never varying more than 9,000,000 oz. from the average of 166,000,000 oz., and showing no tendency either to rise or fall. During this period the important cyanide process was introduced (from about 1895), and generally metallurgy improved, so that the extraction of silver from its ores was markedly increased, which no doubt had its effect in maintaining the output and preventing the disappearance of mining profits.

38. In 1911 the output of Mexico was 79,000,000 fine oz., and it fell to an average of 35,000,000 oz. for 1914-1917 owing to the revolutionary troubles in that country, which synchronised with—but were not due to—the Great War. For the ten years 1912-1921, after which the annual rate recovered to 81,000,000 oz., the country's production was 546,000,000 oz., while if it had continued at 79,000,000 oz. per annum it would have been 790,000,000 oz., so that its output was reduced 244,000,000 oz. in this period. That amount, added to the world's actual production of 1,881,000,000 oz., would have made it 2,125,000,000 oz., or 13 per cent. more, and in such case the shortage in 1918—relieved by the United States Government's sales under the Pittman Act of an amount approximately equal to this ten years' shortage—might not have been felt so acutely. It is difficult, however, to say whether Mexico's failure to contribute its share to the world's output caused a rise in the price of silver, because of the conditions produced by the War. But the object of the present remarks is to indicate that in the past the output has been largely—in the aggregate and over long periods—independent of price, and that a considerable increase in production may occur in spite of falling prices, and *vice versa*. The point at present being considered is not the effect of supply (and demand) upon prices, but the effect of prices on supply (production), which is a different matter.

39. The conclusion reached is that a reduction of price, unless exceptionally severe, would not necessarily have any but a gradual effect on production, or at least that the effect would be considerably less than might be expected if judged by standards applied to other commodities. This idea is based on a variety of points dealt with above—chief among which are that silver is mainly won in association with other metals; that ordinarily the production increases with time, not necessarily as the result of new discoveries more than replacing exhausted mines, but as the result of improved metallurgy; that the past has not indicated that a falling price necessarily reduces production; and that there is in any case a considerable amount of inertia or lag in movements from the nature of the case.

THE RELATION BETWEEN THE DEMAND FOR AND THE SUPPLY OF SILVER.

40. It may be generally said that estimates forecasting the future of silver are usually unduly optimistic, owing more to overrating the probable demand than to understating the probable production. As examples the following may be given. The first is extracted from an article by Mr. Moreton Frewen in "The Nineteenth Century" for February 1919, quoting figures stated to have been supplied by the Director of the United States Mint to Governor Boyd with the phraseology there used; and the second is from "The Mineral Industry" for 1918, quoted by Professors Carpenter and Cullis in their "Report on the World's Production of Silver" to the Indian Currency Committee of 1919, but there attributed to a different source :—

A 30 years' forecast for silver, 1918-48. *Annual demand. Silver at* 5s. *per oz.*	*Oz.*	*Mineral Industry,* 1918. *Oz.*
Net silver to liquidate India's annual balance of trade (£70,000,000 or Rs. 2 per capita) after defraying her home charges	250,000,000	150,000,000
For China, Hongkong, Malaysia and the Phillipines	50,000,000	40,000,000
World's silversmiths' demand on pre-War scale	120,000,000	75,000,000
For subsidiary currencies, Europe and America	70,000,000	60,000,000
New silver for the currency requirements of the Nigerias, West Africa, German and British East Africa	100,000,000	25,000,000
For the reimbursement of the Bland dollars (Pittman Act) for, say, eight years	50,000,000	
Total demand	640,000,000	350,000,000
Present world production from the mines; estimate of Director of the Mint for 1916-17 ...	157,000,000	
World's deficit, say	483,000,000	

41. Table II attached with the complementary Tables III and IV show the actual supply and demand over a long period of time in quinquennial and thirty-year periods. The figures from the discovery of America in 1493 down to 1834 (their division under the various heads being guessed) are inserted in an attempt at completeness. Table III shows how persistently India has absorbed silver, and with more regularity than in the case of gold. The preference for gold has become pronounced in the last 30 years, and the proportions (in value) of 70 per cent. of silver and 30 per cent. of gold in the 60 years to 1894 changed to 45 per cent. and 55 per cent. respectively in the period which has since elapsed. Nevertheless, the absorption of silver in the three successive periods of 30 years each to 1894 was 493,000,000 oz., 783,000,000 oz. and 1,930,000,000 oz. The rate of increase seems at first sight to have been affected by the reduction in price. This is no doubt true as regards private imports, but including Government purchases for coinage the prices annually from 1900 and 1917 moved largely according to the size of the Indian importation, the years of heaviest absorption being usually those of highest price, and *vice versa*. Indeed, in the 11 years of Government purchases the annual average price varied between 24·7*d.* and 40·9*d.* per standard ounce, while during the 7 years when private imports alone took place, the annual average price moved only between 23·7*d.* and 25·3*d.*—a difference due to the Government's considered practice of only buying when requirements could be clearly foreseen.

42. Private and Government net imports of silver since a year after the closing of the mints have been :—

—	Private.	Government.	Total.
	Fine ozs.	Fine ozs.	Fine ozs.
5 years to 1899–00	128,000,000	—	128,000,000
" 1904–05	155,000,000	109,000,000	264,000,000
" 1909–10	230,000,000	172,000,000	402,000,000
" 1914–15	201,000,000	81,000,000	282,000,000
" 1919–20	27,000,000	467,000,000	494,000,000
" 1924–25	357,000,000	3,000,000	360,000,000
	1,098,000,000	832,000,000	1,930,000,000
Annual averages.			
10 years to 1904–05	28,300,000	10,900,000	39,200,000
" 1914–15	43,100,000	25,300,000	68,400,000
" 1924–25	38,400,000	47,000,000	85,400,000

The private import figures have of course been severely affected in the last ten years—first by the prohibition of silver imports in September 1917, and then by the removal of import restrictions and abolition of the 4*d*. import duty in February 1920. During the last 5-year period an average of 71,000,000 oz. per annum was imported privately, but this was exceptional as it immediately followed two and a half years of prohibition of imports and the cancellation of the import duty. In view of this and the earlier figures it would seem that, assuming Indian conditions remain unchanged, the average private demand may well be 50,000,000 oz. rising to 70,000,000 oz. per annum, to which the requirements for coinage, doubtless on a reduced scale as compared with the average of the last 20 years and requiring say 30,000,000 oz., must be added.

43. China's demand is more difficult to estimate, though smaller figures come into question. Its absorption according to the published Customs figures given in Table IV (which are probably much below the mark for reasons referred to in the footnote to that table) varies exceedingly, and it has taken as much as 113,000,000 fine oz. in a year—the abnormal year 1920. Taking the seven quinquennia covering the period 1890-1924 the quantity figures as judged by the London price are :—31,000,000 fine oz., 57,000,000 oz., then an out turn of 28,000,000 oz. followed by another of 75,000,000 oz. and for the last three quinquennia net imports of 123,000,000 oz., 13,000,000 oz., and 311,000,000 oz. On the figures it disgorged silver in 1890-1891, 1901-1908, and 1914-1917, absorbing it in the remaining years. The total for the 35 years was 432,000,000 oz., or an average of 12,400,000 oz. per annum. For the 15 years to 1924 it was 447,000,000 oz. or an average of 29,800,000 oz., while excluding the 5 years to 1919 it rises to 43,400,000 oz per annum. It would seem that China's absorptive power is growing—though as the trade returns show an adverse balance every year on merchandise it is difficult to judge—and the demand for the next 10 years is likely to average anything between 30,000,000 and 50,000,000 oz. per annum, though as in the past the absorption may well be less—or more.

44. The industrial arts before the war, as in the case of gold, took an increasing amount of silver, in addition to old silver re-utilised. Every five years from 1875 to 1914 there was an appreciable increase, but since the war there has been a marked decline, which is probably only temporary. The more recent figures for new silver are estimated as follows, but for the last 10 years especially are very approximate :—

—	United States.	Rest of World (excluding India and China).	Total.
	Fine ozs.	Fine ozs.	Fine ozs.
5 years to 1904	75,000,000	180,000,000	255,000,000
" 1909	101,000,000	209,000,000	310,000,000
" 1914	120,000,000	240,000,000	360,000,000
" 1919	114,000,000	136,000,000	250,000,000
" 1924	132,000,000	113,000,000	245,000,000

The United States before the War took about a third of the total and its demand, after being temporarily checked, is again growing, the highest figure so far reached being 31,300,000 oz. in 1922. The rest of the world has considerably abated its needs and its recovery will be slower. The industrial absorption during the next 10 years will probably be 60,000,000 to 80,000,000 oz. annually.

45. The requirements for coinage for the rest of the world are very difficult to estimate for the figures very widely. In a few years to 1923, Europe has absorbed nothing and indeed added to the supply, first by Continental hoarding and realisation, and latterly by reason of the debasement of British coin, but judging by pre-war standards it should need 25,000,000 oz., rising to 35,000,000 oz. a year, and the amount may well be considerably more as a result of Continental re-monetisation. America—mainly the United States and Mexico, the latter of which has recently been exceptionally coining at the rate of 10,000,000 oz. per annum—should need 15,000,000 oz. a year. Africa has absorbed large amounts, but in recent years has disgorged. It may be set down for 5,000,000 oz. Japan, Hong-Kong, Indo-China and Asia, apart from India and China may take an average of 15,000,000 oz., though the amount on occasion may easily be more.

46. The production of silver in the next ten years—given no surprises with effects similar to the Cobalt discoveries or the Mexican revolution—may perhaps be gauged from the trend of recent years, and may be set down at:—

	1925 *Output.* *Fine oz.*	*Possible* 1935 *Output.* *Fine oz.*
Mexico	89,000,000	105,000,000
United States	66,000,000	75,000,000
Central and South America ...	27,000,000	30,000,000 to 40,000,000
Canada	20,000,000	20,000,000 to 30,000,000
Australia	11,000,000	5,000,000 to 10,000,000
Rest of the World	27,000,000	25,000,000 to 40,000,000
Total annual production ...	240,000,000	260,000,000 to 300,000,000

The consumption already suggested is :—

	10 *years,* 1926-1935. *Fine oz.*
Industrial arts	60,000,000 to 80,000,000
India :	
Private imports	50,000,000 to 70,000,000
Coinage (average)	30,000,000
China	30,000,000 to 50,000,000
Coinage :	
Europe	25,000,000 to 35,000,000
America	15,000,000
Africa	5,000,000
Rest of Asia	15,000,000
Total expected annual consumption	230,000,000 to 300,000,000

47. Probably the demand will on the whole be a growing one, and something near the lower of the limits mentioned may be held to apply at the beginning of the period and something near the higher at the end of it.

48. Thus the position at the beginning and end of the period may be viewed as follows—

	1926. *Fine oz.*	1935. *Fine oz.*
Production	240,000,000	280,000,000
Consumption	240,000,000	280,000,000
Over- or under-production	Nil.	Nil.

The demand must in the event be equal to the supply, and the price of silver will be adjusted to make it so.

THE EFFECT ON THE PRICE OF SILVER OF REALISING 20 CRORES OF RUPEES ANNUALLY.

49. The proposal to sell 68,700,000 fine oz. annually for ten years necessarily involves a discontinuance of the use of new silver for Indian coinage. The amount therefore is in effect about 100,000,000 fine oz. yearly.

50. In the previous section the writer has assumed the probable annual output of silver for the next 10 years, with Indian conditions unchanged, at an average of about 265,000,000 oz., and has also ventured the opinion that to a large extent the output is independent of price, as for the most part silver is won with other metals. Postulating a material reduction in price the expected output might be reduced by 35,000,000 oz. to 230,000,000 oz. per annum, but the sale of the 68,700,000 oz. would in effect add that amount to the production, raising it to say 300,000,000 oz. yearly. Demand and supply would be equal, and cheaper silver would stimulate the consumption of China and the industrial arts, while it would hardly affect coinage in the rest of the world. It would probably also stimulate the private demand of India, *unless* the degrading of

the rupee caused a lack of faith in silver. The position might change as follows, taking annual averages for the ten years :—

—	From	To	Increase.
	Fine oz.	Fine oz.	
India : Private imports	60,000,000	80,000,000	33%
China	40,000,000	55,000,000	38%
Industrial Arts	70,000,000	100,000,000	43%
Demand	170,000,000	235,000,000	38%
India Coinage	30,000,000	Nil.	—
Coinage of rest of the World	65,000,000	65,000,000	Nil.
	265,000,000	300,000,000	13%

Thus supplies would be increased by 13 per cent., but in order to absorb them those who have the choice of buying would (unless silver were to cease to be a marketable commodity) be compelled to increase their takings by an average of 38 per cent. This would mean a profound change in the position, and it could not be effected suddenly and must take time. The more quickly it were applied the wilder would be the variations in the price of silver and the effect on production.

51. In a previous section of this statement attention has been called to the fact that the fall in the price of silver following its virtual demonetisation in Germany in 1871 and the closing of the Indian mints in 1893 did not prevent a very large increase in the production taking place, and that the curves of the production and the price were complementary (i.e., moved oppositely in relation to each other) to a remarkable degree. This, of course, suggests that if the curves were entirely complementary, the aggregate value of the annual production would remain at the same level. How far this is the case is indicated in Table II., which shows that it varied little in the 20 years before the War. As a matter of fact, from 1894 to 1911 the annual values of the output only moved between £17,700,000 and £25,100,000, a variation of not more than 18 per cent. from the mean, the values slightly increasing with time. This phenomenon is altogether contrary to experience in regard to other metal commodities, as is shown in the following table. The period covered is the 20 years 1893-1913, split in the middle, and three-year (centred) averages are used in order to cancel to some extent the distorting effect of trade cycle movements. Index numbers are placed below each figure :—

—	1894.			1903.			1912.		
	Output.	Price.	Value.	Output.	Price.	Value.	Output.	Price.	Value.
Copper ...	Long tons. 320,000,000 100	£46·1 100	£14,800,000 100	Long tons. 587,000,000 183	£58·2 126	£34,100,000 231	Long tons. 946,000,000 295	£69·0 150	£65,300,000 442
Tin ...	72,000 100	£72·2 100	£5,200,000 100	95,000 132	£126·0 174	£12,000,000 230	118,000 164	£186·0 258	£22,000,000 423
Zinc ...	386,000,000 100	£15·8 100	£6,100,000 100	571,000,000 148	£20·6 130	£11,800,000 193	945,000,000 245	£24·7 156	£23,300,000 382
Lead ...	619,000,000 100	£10·2 100	£6,300,000 100	905,000,000 146	£11·6 114	£10,500,000 167	1,166,000,000 189	£16·8 165	£19,600,000 312
Silver ...	Fine oz. 166,000,000 100	Fine. 34·1d. 100	£23,600,000 100	Fine oz. 165,000,000 99	Fine. 27·1d. 80	£18,600,000 79	Fine oz. 222,000,000 134	Fine. 28·9d. 85	£26,800,000 114
World's population	1,472,000,000 100			1,573,000,000 107			1,717,000,000 117		

52. The more the output of the base metals was advanced in relation to the growth of population, the less was the rate of advance in price, though that advance was nevertheless substantial; and the value of the production rose enormously in the period in all cases, i.e., the metals became an increasing necessity of life as mechanics more and more replaced muscle. The case, it is clear, was entirely different with silver, which is to a large extent a luxury commodity, whose value, considering the metal as being a form of wealth, may easily be destroyed. Even

if one discounts the silver figures of the 1893-1903 period, in view of the effect of the closing of the Indian mints to private coinage, the fact remains that ten years after that closing—for it took a long time for the demand to readjust itself to the shock—the value of the production had not risen as in the case of base metals, or indeed risen at all, though it increased afterwards till the War.

53. The figures of the years 1914-1922 are utterly unrepresentative of normal conditions, but it happens that the fairly well-defined trend of the production value between 1902 and 1913, subject to trade cycle fluctuations, was represented by a rising straight line, which, *if* extended through the War and after-War period, would pass through the £33,000,000 to £34,500,000 (gold) values of 1923, 1924, and 1925, and would show a value of £38,000,000 at 1930 and of £41,000,000 at 1935. With a production of, say, 260,000,000 oz. in 1930 and of 280,000,000 oz. in 1935, these values would mean prices of 35*d*. per fine oz. at both 1930 and 1935, given that Indian conditions remained unchanged. According to the first table above, Indian private importers, China, and the industrial arts, if Indian conditions remained unchanged, would have been expected to pay 35*d*. per fine oz. for 170,000,000 oz., or £24,800,000 per annum, and if it is assumed they were willing to pay that sum for the 235,000,000 oz. they would be asked to take (i.e., that the price were merely proportionately reduced), it would mean a price of 25·3*d*. per fine oz. or 23·4*d*. per standard oz.

54. This assumes that the rising trend of the value of the production continued uninterruptedly through the War and after-War years, or could be picked up at its normal point now. One has, however, to remember—

(1) That, as shown in the "Gold" section of this statement, the trend of commodity prices and economic factors generally should, quite apart from the War and the changes it has brought about, have continued until 1920, and then have turned downward or flattened.

(2) The effect on the silver price of events comparable to the suggested policy, such as the virtual demonetisation of silver by Germany in 1871 and the closing of the Indian mints to private coinage in 1893.

(3) The very demoralising consequences to the market of having this additional silver hanging over it for ten years.

(4) The possibility that the people of India would lose faith in silver as a result of the degradation of the rupee, and consequently decrease instead of increase the private imports.

(5) That much would depend not merely on the Government's action as regards silver, but also on its policy as regards gold. If that were in the direction of introducing a gold currency, it would largely augment the already excessive demand for a metal that threatens to be increasingly short supply, and the prolonged fall in prices generally which from other considerations has been assumed would be considerably accentuated. This would, of course, have its effect on the price of silver.

In view of these considerations it would be bold to expect an average price of 24*d*. per standard ounce to be secured.

TABLE I.—CONSUMPTION OF THE WORLD'S GOLD SUPPLY, AND WORLD'S STOCK OF GOLD MONEY.

(In millions of pounds sterling at 84/11½ per fine ounce.)

(Proporion of current output consumed as additional figures under first five headings.)

—	INDUSTRIAL.[1]		INDIA.[2]		CHINA AND EGYPT.[3]		TOTAL DEMAND.		BALANCE AVAILABLE AS MONEY.		WORLD'S GOLD OUTPUT.		STOCK OF GOLD MONEY.[4]			WORLD'S POPULATION.[5]	
											Total.	Increase.	Total.	Increase.	Per head.	Millions.	Increase.
1493 to 1834[6] ...	(280)	(50%)	(60)	(10%)	(28)	(5%)	(368)	(65%)	(196)	(35%)	564	—	196	—	53*d.*	890	—
5 years to 1839 ...	12	86%	2	14%	?		14	100%	—	—	14	—	196	—	51*d.*	925	4%
„ 1844 ...	13	65%	2	10%	?		15	75%	5	25%	20	42%	201	3%	50*d.*	964	„
„ 1849 ...	15	40%	5	13%	?		20	53%	18	47%	38	90%	219	9%	53*d.*	1,003	„
„ 1854 ...	16	14%	5	4%	?		21	18%	97	82%	118	210%	316	44%	73*d.*	1,044	„
„ 1859 ..	21	15%	16	12%	?		37	27%	101	73%	138	17%	417	32%	92*d.*	1,089	„
„ 1864 ...	31	25%	35	28%	?		66	53%	59	47%	125	− 9%	476	14%	101*d.*	1,134	„
„ 1869 ..	43	32%	24	18%	?		67	50%	67	50%	134	7%	543	14%	110*d.*	1,184	„
„ 1874 ...	58	48%	11	9%	?		69	57%	51	43%	120	− 10%	594	9%	115*d.*	1,235	„
„ 1879 ...	59	53%	3	3%	5	4%	67	60%	45	40%	112	− 7%	639	8%	119*d.*	1,292	„
„ 1884 ...	53	51%	19	18%	9	9%	81	78%	23	22%	104	− 7%	662	4%	118*d.*	1,350	„
„ 1889 ...	50	44%	12	10%	4	4%	66	58%	48	42%	114	10%	710	7%	120*d.*	1,413	„
„ 1894 ...	52	34%	4	3%	4	3%	60	40%	91	60%	151	32%	801	13%	131*d.*	1,472	„
„ 1899 ...	65	26%	24	9%	8	3%	97	38%	156	62%	253	68%	957	19%	151*d.*	1,526	„
„ 1904 ...	79	26%	31	10%	17	6%	127	42%	179	58%	306	21%	1,136	19%	172*d.*	1,588	„
„ 1909 ...	95	22%	50	12%	13	3%	158	37%	273	63%	431	41%	1,409	24%	203*d.*	1,666	5%
„ 1914 ...	121	26%	96	20%	6	1%	223	47%	247	53%	470	9%	1,656	18%	226*d.*	1,752	„
„ 1919 ...	91	21%	51	12%	14	3%	156	36%	274	64%	430	− 9%	1,930	17%	254*d.*	1,820	4%
„ 1924 ...	87	24%	103	29%	− 2	− 1%	188	52%	170	48%	358	− 17%	2,100	9%	264*d.*	1,910	5%
1493 to 1834	(280)	(50%)	(60)	(10%)	(28)	(5%)	(368)	(65%)	(196)	(35%)	564	—	196	—	53*d.*	890	—
30 years to 1864 ...	108	24%	65	14%	?		173	38%	280	62%	453	—	476	—	101*d.*	1,134	—
„ 1894 ...	315	43%	73	10%	22	3%	410	56%	325	44%	735	62%	801	68%	131*d.*	1,472	30%
„ 1924 ...	538	24%	355	16%	56	2%	949	42%	1,299	58%	2,248	206%	2,100	162%	264*d.*	1,910	30%
TOTALS	1,241	31%	553	14%	106	3%	1,900	48%	2,100	52%	4,000	—	—	—	—	—	—
5 years to 1929[7] ...	*90*	*23%*	*120*	*30%*	*10*	*3%*	*220*	*56%*	*175*	*44%*	*395*	*10%*	*2,275*	*8%*	*272d.*	*2,010*	*5%*
„ *1934*[7] ...	*110*	*31%*	*110*	*30%*	*15*	*4%*	*235*	*65%*	*125*	*35%*	*360*	*− 9%*	*2,400*	*5%*	*272d.*	*2,120*	„

[1] Europe and America. Based on Soetbeer for 1831–1880 and Bureau of U.S Mint for 1890–1913, the other figures being approximated by the writer.

[2] Net import for years to March 31st following, plus country's own production for calendar years.

[3] Egypt from 1879 only and China from 1889 only (except for the guess of the first line), plus, in the case of the latter, the country's own production.

[4] At end of period, built up on the "Balance Available as Money" column. Excluding India, China and Egypt. The per head figures (in pence) based on the estimated population of the world, not of gold using countries only.

[5] At end of period.

[6] Figures divided roughly at a guess, in order to give totals from the discovery of America.

[7] A rough forecast. Not actual figures.

TABLE II.—CONSUMPTION OF THE WORLD'S SILVER SUPPLY.

(*In millions of fine ounces.*)

(*Proportion of current output consumed as additional figures under first five headings.*)

—	Industrial[1]		India.[2]		China.[3]		Total Demand apart from Coinage.[4]		Balance of Output.[5]		World's[6] Output. Total.	World's Output. Increase.	London Price. Per fine oz.	Value of Production. £	Chronology.
1493 to 1834[7]	(1,350)	(30%)	(1,350)	(30%)	(450)	(10%)	(3,150)	(70%)	(1,331)	(30%)	4,481	—	(65*d.*)	1,215,000,000	
5 years to 1839	30	30%	33	33%	?		63	63%	37	37%	(100)	—	64·6*d.*	27,000,000	
" 1844	35	29%	40	33%	?		75	62%	45	38%	120	20%	64·5*d.*	32,000,000	
1849	35	27%	15	11%	?		50	38%	80	62%	130	8%	64·4*d.*	35,000,000	
" 1854	40	28%	43	30%	?		83	58%	59	42%	142	9%	65·9*d.*	39,000,000	
" 1859	45	31%	185	128%	?		230	159%	−85	−59%	145	2%	66·5*d.*	40,000,000	1859. Nevada silver discoveries.
" 1864	50	28%	177	100%	?		227	128%	−50	−28%	177	22%	66·3*d.*	49,000,000	1865. Latin Union formed.
" 1869	50	23%	167	78%	?		217	101%	−2	−1%	215	21%	65·7*d.*	59,000,000	1871. Germany adopts gold standard.
" 1874	75	24%	52	16%	?		127	40%	190	60%	317	47%	64·7*d.*	85,000,000	1873. United States adopts gold standard.
" 1879	75	22%	114	34%	?		189	56%	151	44%	340	7%	58·8*d.*	83,000,000	1878. Bland Act in United States.
" 1884	85	21%	98	24%	?		183	45%	228	55%	411	21%	55·5*d.*	95,000,000	
" 1889	110	21%	157	31%	?		267	52%	243	48%	510	24%	48·5*d.*	103,000,000	1890. Sherman Act in United States.
" 1894	160	22%	195	26%	31	4%	386	52%	360	48%	746	46%	42·7*d.*	132,000,000	1893. India closes mints.
" 1899	180	22%	128	15%	57	7%	365	44%	456	56%	821	10%	30·9*d.*	105,000,000	1897. Russia and Japan adopt gold standard.
" 1904	255	30%	264	31%	−28	−3%	491	58%	351	42%	842	3%	28·3*d.*	99,000,000	
" 1909	310	33%	402	43%	−75	−8%	637	68%	299	32%	936	11%	29·6*d.*	115,000,000	
" 1914	360	34%	282	26%	123	12%	765	72%	296	28%	1,061	13%	28·2*d.*	124,000,000	1910. Indian import duty raised to 4d. per oz.
" 1919	250	27%	494	54%	13	1%	757	82%	166	18%	923	−13%	43·4*d.*	167,000,000	
" 1924	245	23%	360	35%	311	30%	916	88%	124	12%	1,040	13%	43·0*d.*	186,000,000	
1493 to 1834	1,350	30%	1,350	30%	450	10%	3,150	70%	1,331	30%	4,481	—	65·0*d.*	1,215,000,000	
30 years to 1864	235	29%	493	60%	?		728	89%	86	11%	814	—	65·5*d.*	222,000,000	
" 1894	555	22%	783	31%	31	1%	1 369	54%	1,170	46%	2,539	212%	52·6*d.*	557,000,000	
" 1924	1,600	29%	1,930	34%	401	7%	3,931	70%	1,692	30%	5,623	122%	34·0*d.*	796,000,000	
TOTALS ...	3,740	28%	4,556	34%	882	6%	9,178	68%	4,279	32%	13,457	—	49·8*d.*	2,790,000,000	

(1) Europe and America. Based on Soetbeer to 1880 and Bureau of the U.S. Mint since, but with considerable assumptions by the writer in attempting to complete the figures.
(2) Net imports. Years to March 31st following. Country's own production not allowed for (Nil to 1914, 7,000,000 oz. for 1915–19 and ? 22,000,000 oz. for 1920-24).
(3) Included under fifth heading to 1889.
(4) Excluding China to 1889.
(5) Including China to 1889. Also includes large amounts for coinage for the rest of Asia (excluding India) and for Africa. Subject to this, represents amounts available for the World's coinage.
(6) To 1874 these are the figures for the quinquennia ending one year later. Soetbeer is followed to 1873 and the Bureau of the U.S. Mint since.
(7) Figures divided roughly at a guess in order to give totals from the discovery of America. In the period 1700–1830 China is said to have absorbed £90,000,000 to £100,000,000 through Canton.

Table III.—India's Absorption of Silver and Gold.

(In millions of pounds sterling.) *(Rupees converted at average exchange for each year.)*

—	India's Absorption.			Proportions Taken.		Net Exports of Merchandise.	Proportion of Net Imports of Treasure to Net Exports of Merchandise.	Rate per Rupee.	Chronology.
	Silver.(1)	Gold.(2)	Total Treasure.	Silver.	Gold.				
5 years to 1839–40	9	2	11	85%	15%	(30)	(37%)	23·0d.	1835. Silver standard adopted with rupee of 165 gr. of pure silver.
„ 1844–45	11	2	13	87%	13%	(31)	42%	22·9d.	1841. Mohur of 165 gr. of pure gold authorised to be received by public treasuries.
„ 1849–50	3	5	8	40%	60%	(30)	27%	22·0d.	
„ 1854–55	12	5	17	69%	31%	(40)	42%	24·0d.	1853. Gold declared not legal tender. Rupees unlimited legal tender. Free coinage of silver.
„ 1859–60	50	16	66	76%	24%	(47)	140%		
„ 1864–65	50	35	85	59%	41%	(90)	106%	23·9d.	
„ 1869–70	46	24	70	66%	34%	96	73%	23·5d.	
„ 1874–75	14	11	25	56%	44%	110	23%	22·6d.	1871. Germany adopts gold standard. 1873. United States adopts gold standard.
„ 1879–80	30	3	33	91%	9%	98	34%	20·4d.	
„ 1884–85	25	19	44	57%	43%	119	37%	19·5d.	
„ 1889–90	34	12	46	74%	26%	101	46%	17·1d.	
„ 1894–95	37	4	41	88%	12%	114	37%	15·5d.	1893. Indian mints closed. 1894. Silver import duty of 5% ad valorem imposed.
„ 1899–00	18	24	42	43%	57%	105	40%	15·1d.	1896–97 and 1899–90. Great famines owing to failure of crops. 1899. Rupee fixed at 16d. after falling to 13d. for 1894–95. Sovereigns legal tender at Rs. 15 to £1.
„ 1904–05	34	31	65	52%	48%	147	44%	16·0d.	
„ 1909–10	54	50	104	52%	48%	160	65%	16·0d.	
„ 1914–15	35	96	131	27%	73%	223	59%	16·0d.	1910. Silver import duty raised to 4d. per oz.
„ 1919–20	107	68	175	61%	39%	317	55%	18·0d.	1917–20. Gold importation restricted. Silver importation prohibited.
„ 1924–25	55	108	163	34%	66%	153	107%	17·4d.	1920. Silver import duty removed. Free gold and silver importation restored.
30 years to 1864–65	135	65	200	68%	32%	268	75%		
„ 1894–95	186	73	259	72%	28%	638	41%		
„ 1924–25	303	377	680	45%	55%	1,105	62%		
Totals, 90 years ...	624	515	1,139	55%	45%	2,011	57%		

(1) Net Imports.
(2) Net imports as given in trade returns (i.e., at commercial prices for the 6 years to 1924–25 when gold was at a premium), plus India's own production.

TABLE IV.—CHINA'S ABSORPTION OF SILVER AND GOLD.

(In millions of pounds sterling, converted at average exchange for each year.)

	Net Imports (+) or Exports (−).			Proportions Taken.		Net Imports of Merchandise.	Proportion of Net Imports of Treasure to Net Imports of Merchandise.	Exchange Rate per H. tael.
	Silver.(1)	Gold.(2)	Total Treasure.	Silver.	Gold.			
5 years to 1894	+ 3·5	+ 0·1	+ 3·6	97%	3%	38·9	9%	52d.
" 1899	+ 7·4	− 0·1	+ 7·3	101%	− 1%	39·8	18%	37d.
" 1904	− 3·0	+ 6·5	+ 3·5	—	—	66·6	5%	34d.
" 1909	−10·0	+ 6·0	− 4·0	—	—	112·3	−4%	35½d.
" 1914	+14·4	+ 3·1	+17·5	82%	18%	93·5	19%	34d.
" 1919	+11·3	+17·6	+28·9	39%	61%	52·3	55%	52½d.
" 1924	+61·8	− 9·0	+52·8	117%	−17%	264·1	20%	52d.
Totals, 35 years ...	+85·4	+24·2	+109·6	78%	22%	667·5	16%	—

(1) Net Imports.

(2) Net imports as given in trade returns (i.e., at commercial prices for the 6 years to 1924 when gold was at a premium), plus the country's own production.

NOTE.—These figures are collated from the Annual Reports of the Imperial Chinese Customs. They do not include Hong Kong. Every year shows an adverse balance of trade on merchandise alone. Large remittances home made by Chinamen abroad are not included in the treasure figures.

TABLE V.—DISTRIBUTION OF WORLD'S TOTAL GOLD PRODUCTION.

—	End of 1834. £	End of 1834. Proportion.	End of 1873. £	End of 1873. Proportion.	End of 1913. £	End of 1913. Proportion?.	End of 1924. £	End of 1924. Proportion.
In State Banks and Treasuries	?	?	?	? ?	945,000,000	60% 30%	1,710,000,000	81% 43%
In other banks	?	?	?	? ?	125,000,000	8% 4%	90,000,000	4% 2%
In circulation	?	?	?	? ?	500,000,000	31% 16%	? 100,000,000	5% 3%
Not traceable (including hoarding)	?	?	?	? ?	18,000,000	1% 1%	200,000,000	10% 5%
WORLD'S STOCK OF GOLD MONEY (excluding India, China and Egypt)	196,000,000	35%	587,000,000	100% 47%	1,588,000,000	100% 51%	2,100,000,000	100% 53%
Absorbed by Industrial Arts (Europe and America)	280,000,000	50%	477,000,000	— 38%	1,042,000,000	— 33%	1,241,000,000	— 31%
Absorbed by India	60,000,000	10%	158,000,000	— 13%	392,000,000	— 13%	553,000,000	— 14%
" " China and Egypt	28,000,000	5%	28,000,000	— 2%	100,000,000	— 3%	106,000,000	— 2%
World's Gold Output (from 1493)	564,000,000	100%	1,250,000,000	— 100%	3,122,000,000	— 100%	4,000,000,000	— 100%
Gold Money in the United States	—	—	22,000,000	3·8% 1·8%	392,000,000	24·7% 12·6%	935,000,000	44·5% 23·4%
" " United Kingdom ...	—	—	*105,000,000	17·9% 8·4%	158,000,000	10·0% 5·1%	? 170,000,000	8·1% 4·2%

* Mentioned in Enclyclopœdia Britannica, Vol. 16, p. 722.

TABLE VI.—DISTRIBUTION OF THE WORLD'S TOTAL SILVER PRODUCTION.

—	End of 1834. Fine ozs.	End of 1834. Proportion.	End of 1873. Fine ozs.	End of 1873. Proportion.	End of 1913. Fine ozs.	End of 1913. Proportion.	End of 1924. Fine ozs.	End of 1924. Proportion.
World's Stock of Silver Money (excluding India, China and Egypt)	?	?	?	?	? 1,900,000,000	17%	? 2,000,000,000	15%
Lost or not traceable*	?	?	?	?	? 2,064,000,000	18%	? 2,279,000,000	17%
	1,331,000,000	30%	1,565,000,000	27%	3,964,000,000	35%	4,279,000,000	32%
Absorbed by industrial arts (Europe and America)	1,350,000,000	30%	1,695,000,000	29%	3,170,000,000	28%	3,740,000,000	28%
Absorbed by India	1,350,000,000	30%	2,054,000,000	36%	3,636,000,000	32%	4,556,000,000	34%
Absorbed by China	450,000,000	10%	450,000,000	8%	514,000,000	5%	882,000,000	6%
World's Silver Output (from 1493)	4,481,000,000	100%	5,764,000,000	100%	11,284,000,000	100%	13,457,000,000	100%
Silver Money in the United States	—	—	5,000,000	0·1%	570,000,000	5·1%	600,000,000	4·5%
Silver Money in the United Kingdom ...	—	—	55,000,000	0·9%	100,000,000	0·9%	160,000,000	1·3%

* Including coinage for Straits Settlements, Hong Kong, Indo-China, British West Africa, other portions of Africa, etc. These countries are not included in the World's Stock of Silver Money given above. Their coinage has been heavy. India in 1895–1904 coined about 149,000,000 fine ozs. for the Straits Settlements and Hong Kong, and the amount for the following 10 years was at nearly half this rate.

Table VII.—Gold Production.

(In millions of pounds at 84/11½ per fine ounce.)

—	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.
Transvaal	38·6	39·5	38·3	35·8	35·4	34·7	34·5	29·8	38·9	40·7	40·8
United States	20·8	19·0	17·2	14·1	12·4	10·5	10·3	9·7	10·4	10·4	9·7
Canada	3·9	4·0	3·1	3·0	3·3	3·3	3·9	5·4	5·2	6·5	7·4
Australasia	10·2	8·3	7·4	6·1	5·5	4·7	3·8	3·9	3·8	3·5	3·0
Mexico	1·3	1·6	1·8	3·5	3·2	3·1	2·9	3·2	3·3	3·4	3·3
Rhodesia	3·9	3·9	3·5	2·7	2·5	2·3	2·5	2·8	2·8	2·7	2·5
Russia	5·4	4·6	3·7	2·5	2·3	0·2	0·2	0·6	1·1	2·4	3·1
Rest of World	12·3	12·6	11·3	11·3	10·4	10·5	9·9	10·1	10·0	10·4	10·2
Total ...	96·4	93·5	86·3	79·0	75·0	69·3	68·0	65·5	75·5	80·0	80·0

Consumption of Gold.

	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.
Industrial Arts (America and Europe)	17·0	18·0	16·0	17·0	23·0	22·0	15·0	17·0	17·0	16·0	(16·0)
India (year to March 31st following)	1·3	5·0	19·6	−3·3	27·9	3·5	0·7	26·6	20·1	52·4	(27·0)
China	−1·7	2·6	2·6	0·4	11·5	−3·9	−2·2	1·1	−0·5	−0·6	—
Egypt	−0·8	−0·2	−0·1	−0·0	−0·0	0·7	0·0	0·1	1·9	1·2	—
Total Demand	15·8	25·4	38·1	14·1	62·4	22·3	13·5	44·8	38·5	69·0	43·0
Balance available for money (difference)	80·6	68·1	48·2	64·9	12·6	47·0	54·5	20·7	37·0	11·0	37·0
World's Output	96·4	93·5	86·3	79·0	75·0	69·3	68·0	65·5	75·5	80·0	80·0

World's Stock of Gold Money.

	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.
Total ...	1,736	1,804	1,852	1,917	1,930	1,977	2,031	2,052	2,089	2,100	2,137
Per capita	236*d.*	243*d.*	247*d.*	254*d.*	254*d.*	258*d.*	263*d.*	263*d.*	265*d.*	264*d.*	266*d.*

APPENDIX 83.

Supplementary statement submitted by Mr. Joseph Kitchin of the Union Corporation, Limited, London, on "Redundancy in the United States Stock of Gold Money."

This matter may be looked at in three ways:—

(1) From 1873, when the United States adopted the gold standard and had only £22,000,000 of gold money, to 1887, when its stock reached £134,000,000, the country was evidently collecting its necessary stock of gold. During the first six years of this period its currency was at a discount. From 1887 to 1895 commodity prices which commenced to fall in 1873, reached their lowest point, and the stock fell to £104,000,000. From 1895 to 1913, during which period the world's stock of gold money was advancing rapidly and commodity prices were rising strongly, gold money in the United States increased every year (except in 1909) until it reached £392,000,000. From the end of 1914 to the end of 1924, owing largely to the effect of the War, its stock increased from £371,000,000 to £935,000,000, and in 1925 the tide turned, reducing the figure to £907,000,000. At the 1895-1913 rate of increase it would now be £584,000,000 or £323,000,000 less. From 12·6 per cent. of the world's stock of gold money at the end of 1895, the United States proportion increased to 24·7 per cent. at the end of 1913. It was 22·4 per cent. at the end of 1914, 34 per cent. at the end of 1918, 28·8 per cent. at the end of 1919, and 44·5 per cent. at the end of 1924, and is now 42·4 per cent. At the 1895-1913 rate it would now be 27·4 per cent., the difference of 15 per cent. on the world's stock of £2,137,000,000 at the end of 1925 being the before-mentioned £323,000,000. This way of looking at matters tends to exaggerate the final figure, because it assumes a simple or fixed annual increase, while economic progress should advance at a compound rate requiring a rising increase in absolute amount per annum.

(2) The increase in the holding of gold money shown by the World and the United States in the 18 years to 1913 and the 12 years to 1925 respectively have been:—

—	World.	United States.
1895–1913:		
Increase in Stock of Gold Money	£827,000,000 to £1,588,000,000 or 1·92 times.	£104,000,000 to £392,000,000 or 3·77 times.
Compound rate of increase per annum.	3·7%	7·6%
1913–1925:		
Increase in Stock of Gold Money	£1,588,000,000 to £2,137,000,000 or 1·35 times.	£392,000,000 to £907,000,000 or 2·32 times.
Compound rate of increase per annum.	2·5%	7·25%

During the 18 years before the War the United States increased its stock at twice the rate of the world, and this is understandable in view of the rapid increase of wealth in the country. From 1914, owing to the operation of the Federal Reserve Bank system, it should have needed proportionately less gold, while, on the other hand, its late entry into the War increased its requirements relatively to the rest of the world. In the period 1913-1925 the world's stock increased at a lower rate than in 1895-1913 (94 per cent. of the addition to the stock going to the United States), and if consequently the United States had needed to increase its stock at say 5 per cent. per annum instead of the 7·6 per cent. of the previous 18 years, this would have meant a stock of £704,000,000 at the end of 1925, or £203,000,000 less than the actual figure.

(3) The Federal Reserve Banks are required to hold 40 per cent. of gold on lawful money against their notes and 35 per cent. of gold against their deposits, or an average on present figures of about 38 per cent. Normally, it would hold a higher proportion, probably in excess of 50 per cent. Before the War central note-issuing banks in gold standard countries normally held gold reserves to the extent of about 50 per cent. of their combined notes and deposits, and this test

can be applied to the Federal Reserve system. Figures showing the recent gold monetary position in the United States are as follows:—

U.S. TREASURY STATEMENT.

(In millions of dollars.)

—	1 Jan., 1923.	1 Jan., 1924.	1 Jan., 1925.	1 Jan., 1926.	1 March, 1926.
Gold coin and bullion held in Treasury for F.R. Banks and Agents.	2,235	2,220	1,987	1,649	1,653
Gold coin and bullion outside Treasury held by F.R. Banks and Agents.	220	278	255	290	312
Gold certificates (covered 100% in gold in Treasury) held by F.R. Banks and Agents.	405	395	538	598	621
	2,860	2,893	2,780	2,537	2,586
Gold certificates (covered 100% in gold in Treasury) in circulation.	303	582	971	1,114	1,076
Gold coin and bullion in circulation	429	415	458	424	422
Other gold held in Treasury against U.S. Notes, etc.	341	357	338	333	361
Total stock of gold coin and bullion in the United States.	3,933	4,247	4,547	4,408	4,445
Total stock of money (including silver) in circulation in the United States.	4,733	4,951	4,993	5,008	4,814
Total stock of money (including silver) in circulation in the United States, per capita.	42·81	44·22	44·03	43·62	41·84

FEDERAL RESERVE BOARD STATEMENT.

—	3 Jan., 1923.	2 Jan., 1924.	31 Dec., 1924.	30 Dec., 1925.	7 April, 1926.
F.R. Notes in actual circulation	2,411	2,245	1,862	1,835	1,653
Total deposits of Reserve Banks	2,025	2,051	2,311	2,357	2,278
Total F.R. Notes in circulation and deposits ...	4,436	4,296	4,193	4,192	3,931
Total F.R. Gold Reserves	3,049	3,084	2,937	2,704	2,783
Proportion of Gold Reserves to combined Notes and Deposits.	67·4%	71·8%	70·4%	64·5%	70·8%

The following rearrangement of these figures may be added, with a note of the probable redundancy:—

(In millions of dollars.)

—	End 1922.	End 1923.	End 1924.	End 1925.	March, 1926.
Total F.R. Notes in circulation and deposits ...	4,436	4,296	4,173	4,192	3,931
Gold Reserves required at 50%	2,218	2,148	2,086	2,096	1,965
Actual Gold reserves	3,049	3,084	2,937	2,704	2,783
Difference—apparent redundancy	831	936	851	608	818

If gold certificates in circulation (the amount of which around 1920-1922 was only $200,000,000) had been represented by F.R. Notes instead, the following figures would have resulted:—

(In millions of dollars.)

—	End 1922.	End 1923.	End 1924.	End 1925.	March. 1926.
Total F.R. Notes in circulation and deposits ...	4,436	4,296	4,173	4,192	3,931
If the Gold Certificates in circulation had been substituted by F.R. Notes.	303	582	971	1,114	1,076
The total of F.R. Notes in circulation would have been.	4,739	4,878	5,144	5,306	5,007
Gold reserves required at 50%	2,369	2,439	2,572	2,653	2,503
The actual gold reserves would have been (adding the figures for gold certificates in circulation to the actual F.R. gold reserves as above).	3,352	3,666	3,908	3,818	3,859
Difference—apparent plus dormant redundancy	983	1,227	1,336	1,165	1,356
Redundancy made dormant by putting gold certificates in circulation.	152	291	485	557	538
Level of wholesale prices of commodities in the United States (average of four indices).	157	152	158	157	? 151

This statement shows the efforts made in the United States to keep prices stable by the circulation of gold certificates covered by 100 per cent. of gold rather than Federal Reserve notes. Since the end of 1922 the aggregate of notes and gold certificates in circulation has remained comparatvely stable at $2,700,000,000 to $2,900,000,000, but the circulation of Federal Reserve notes has declined from $2,411,000,000 to $1,653,000,000, while that of gold certificates has been markedly augmented from $303,000,000 to $1,076,000,000, so that the difference between them has dropped from $2,108,000,000 at the end of 1922 to $891,000,000 at the end of 1924 and to $577,000,000 on the latest figures. This clearly shows that the authorities are attempting to make the redundant gold as ineffective as possible as regards influencing prices. Applying the 50 per cent. gold reserve ratio before mentioned to the combined notes and deposits of the Reserve Banks, the amount of redundancy of gold in the Reserve Banks—called " apparent redundancy " in the table above—is shown since 1922 to be from £125,000,000 to £192,000,000. But the total (apparent and dormant) redundancy would have been higher if it were not for the putting of gold certificates into circulation for in that case it is shown that it would have been from £202,000,000 to £279,000,000. It is, of course, to be expected that if the present policy of the Reserve Board were to be reversed the gold certificates would come back from circulation very slowly.

On the whole it may be said that while the United States has added £515,000,000 to its stock of gold money in the twelve years to 1925, only some £280,000,000 of that amount is now redundant owing to the economic progress made by the country, while by the monetary policy adopted £110,000,000 of this £280,000,000 has been rendered dormant, and only £170,000,000 is actually redundant at present. The flow of gold into the United States has stopped, and the total stock of gold money shows on the whole a declining tendency.

In a separate statement the writer has estimated that the world's stock of gold money will be £2,425,000,000 at the end of 1935. This, with the figures in the first table above and the assumption that the United States' stock will be the same in 1935 as in 1925, yields the following (the percentages are compound rates of increase per annum for the intervals) :—

End of	United States.			Rest of World.			World.		
	£			£			£		
1895 ...	104,000,000			723,000,000			827,000,000		
		7·6%			2·85%			3·7%	
1913 ...	392,000,000			1,196,000,000			1,588,000,000		
		7·25%	3·9%		0·25%	1·1%		2·5%	1·95%
1925 ...	907,000,000			1,230,000,000			2,137,000,000		
		Nil			2·15%			1·25%	
1935 ...	907,000,000			1,518,000,000			2,425,000,000		

The assumption that the United States' total will remain the same in 1935 as in 1925 is based on the idea that it will take 10 years to remove the present redundancy, and the figures arrived at seem reasonable. They show the United States, owing to its superior rate of economic progress, taking gold at twice the world rate both in 1895-1913 and in 1913-1935—in the latter period at a much decreased rate, thus accommodating itself to the slower rate of increase in the world totals—and they show the rest of the world, after taking hardly any gold on balance for 1913-1925, readjusting itself thereafter by relieving the United States of its surplus (or rather by taking the whole of the world's new gold production available for monetary purposes), and at a not excessive rate if allowance is made for the necessity of making up for the set-back caused by the War on the one hand and the impoverishment due to the War on the other.

It has already been suggested that the apparent redundancy of gold in the United States under the system of price stabilisation adopted is £170,000,000, or £280,000,000 if one includes the hidden redundancy due to circulation of gold certificates in place of notes. This would mean that, of a stock of £907,000,000 at the end of 1925, £630,000,000 was normally required which was raised to £740,000,000 by the expedient of circulating gold certificates. From £740,000,000 at the end of 1925 to £907,000,000 still at the end of 1935 is an increase of 2·05 per cent. per annum and from £630,000,000 to £907,000,000 is an increase of 3·7 per cent. per annum. An average of these rates—say 2·5 per cent., taking twice the World's increase for the period as before—would raise £630,000,000 at the end of 1925 to £835,000,000 at the end of 1935, leaving £70,000,000 to represent the apparent and dormant redundancy, from which, to arrive at the apparent redundancy as shown by Federal Reserve Board figures, must be deducted half the amount of gold certificates then in circulation. The raising of the £630,000,000 to £907,000,000 at 2·5 per cent. per annum—i.e., to allow fully for both apparent and dormant redundancy on the assumption that all the gold certificates will be taken out of circulation, an unlikely event would take until 1940. If the present figure of the circulation of gold certificates remains unchanged for an indefinite period it would take until 1934 to raise the £740,000,000 to £907,000,000 at 2·5 per cent. per annum. Taking such a rate as 2·5 per cent. allows for the fall in commodity prices which the writer expects to take place.

The policy of the Reserve Board will apparently be to maintain and increase the circulation of gold certificates so long as there is any apparent redundancy, and as that disappears (as judged by Federal Reserve figures), to reduce their circulation until more normal figures are reached. How far this process will go on depends upon the policy adopted. The United States may also continue to loose gold—it lost £21,000,000 in the fourteen months to the end of February last—and this would expedite the elimination of the redundancy. If the Federal Reserve Board's ratio of gold reserves to liabilities is permanently kept above 50 per cent., this would also reduce the redundancy. It therefore seems that the redundancy should disappear somewhere between 1930 and 1940, with a strong probability of its vanishing well within 10 years from the present time.

End of	*World's stock of gold money	†Proportion in United States.		End of	*World's stock of gold money	†Proportion in United States.		End of	*World's stock of gold money	†Proportion in United States.	
	Millions of pounds.	Millions of pounds.	Per cent.		Millions of pounds.	Millions of pounds.	Per cent.		Millions of pounds.	Millions of pounds.	Per cent.
1873	586	22‡	3·7	1892	753	120	15·9	1911	1,497	370	24·7
1874	594	24‡	4·0	1893	774	122	15·8	1912	1,537	387	25·2
1875	601	18‡	3·0	1894	801	111	13·8	1913	1,588	392	24·7
1876	610	20‡	3·3	1895	827	104	12·6	1914	1,656	371	22·4
1877	621	27‡	4·3	1896	852	121	14·2	1915	1,736	473	27·2
1878	634	36‡	5·7	1897	882	131	14·9	1916	1,804	589	32·6
1879	639	62	9·7	1898	921	171	18·6	1917	1,852	626	33·8
1880	643	82	12·8	1899	957	185	19·3	1918	1,917	652	34·0
1881	649	100	15·4	1900	989	204	20·6	1919	1,930	556	28·8
1882	653	99	15·2	1901	1,022	216	21·1	1920	1,977	605	30·6
1883	657	107	16·3	1902	1,056	230	21·8	1921	2,031	753	37·0
1884	662	108	16·3	1903	1,093	245	22·4	1922	2,052	809	39·4
1885	670	115	17·2	1904	1,136	250	22·0	1923	2,089	874	41·8
1886	681	121	17·8	1905	1,196	265	22·2	1924	2,100	935	44·5
1887	690	134	19·4	1906	1,209	300	24·2	1925	2,137	907	42·4
1888	701	134	19·1	1907	1,286	332	25·8				
1889	710	131	18·5	1908	1,354	341	25·2	1930	? 2,305		
1890	720	133	18·5	1909	1,409	337	23·9				
1891	733	129	17·6	1910	1,454	352	24·2	1935	? 2,425		

* The writer's computation, excluding India, China and Egypt. † From U.S. Mint Reports. ‡ At June 30.

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APPENDIX 84.

Letter dated the 30th March 1926, from the Manager, Chartered Bank of India, Australia and China, on behalf of the British Exchange Banks.

We beg to acknowledge receipt of your letter of the 9th instant, with enclosures as specified, and beg to say that Mr. Charles Nicoll, General Manager of the National Bank of India, Limited, will be pleased to attend at the India Office at 10.30 a.m. on the 14th proximo, as representing the British Exchange Banks, and give evidence within the scope as outlined hereunder.

The questionnaires submitted have been perused with interest, and as they cover a very extended field, we elect to confine ourselves to the following heads:—

1. *Gold currency.*—We are not in favour of the immediate introduction of a gold currency into India.

2. *A gold standard.*—We are in favour of a gold standard, i.e. that it is put on the Statute Book that the Government is bound to buy gold at a rate to be fixed upon (this will depend on the basis at which the rupee is fixed) and to sell gold for export (or the equivalent in gold funds) at a rate to be arrived at as above. We emphasise the Government because we are of opinion that for the present there is no other authority to whom those duties could legitimately be delegated.

3. *Council Bills.*—Only to be sold to the actual extent of Government published Budget requirements, and should be put up for public tender in India and London. The sale of council bills may be undertaken by the Imperial Bank as Agents of the Government.

4. *Currency.*—No additional currency should be issued that is not covered by the actual tender of gold coin or bullion in India and/or in London earmarked for shipment to India.

5. *Currency Notes.*—In our opinion all currency notes should remain Government of India notes and the management of the issue remain in the hands of the Government.

6. *Rupees.*—The legal tender of rupees not to be disturbed.

7. *Stabilisation of the Rupee.*—We consider the stabilisation of the rupee is desirable, and that the time has arrived when it is practicable. The present position is unsatisfactory, owing to the uncertainty, which reacts adversely on trade.

As to the basis, we are of opinion that the advantages attending the adoption of the rate of 1*s.* 6*d.*, which has been the working rate for some time past, outweigh the disadvantages, and consequently we see no objection to stabilising on the basis of 1*s.* 6*d.*, in preference to the old basis of 1*s.* 4*d.*

We do not think that fixing the rupee at, say 1*s.* 6*d.*, once it is accepted as an accomplished fact, will affect the demand for gold in India to any appreciable extent.

8. *Gold reserves.*—In our opinion, the fact must not be lost sight of that there is an important section of the Indian community who have at heart the wish for a gold currency, and although the more moderate of this line of thought recognise that the present time is not opportune, still the idea exists, and as time goes on it may gather force sufficient to call for the Indian Government giving the matter serious attention. It is with this end in view, therefore, that we advocate a policy which will increase the gold reserves, so that when the day comes (it may be ten or more years hence) India's gold position will have been steadily improving all the time, which will enable her to tackle the problem when it does come up again upon a surer basis.

Also, it will give a measure of comfort to the gold currency section to see that something is being done.

NOTE.—The following is a list of the British Exchange Banks party to the above:—

The Chartered Bank of India, Australia, and China.
The National Bank of India, Limited.
The Hong Kong and Shanghai Banking Corporation.
The Mercantile Bank of India, Limited.
Lloyd's Bank, Limited, Eastern Department.
The P. and O. Banking Corporation, Limited.
The Eastern Bank, Limited.

APPENDIX 85.

Statement of evidence submitted by Sir Stanley Reed, K.B.E., Director of the Bombay Electric Supply and Tramways Company, Limited.

(1) The time is ripe for a solution of the problems of Indian currency and exchange by measures for the stabilisation of the rupee.

(2) The rupee should be stabilised on a gold standard.

The ratio at which this stabilisation should be effected must be considered in relation to the history of the Indian currency. The ratio suggested by the Herschell Committee in 1893 was 1*s*. 4*d*. The ratio proposed by the Fowler Committee in 1898 and adopted by the Government of India was 1*s*. 4*d*. That ratio was the established legal standard of money payments from 1898 until the disturbances caused by the war; when these adjusted themselves the Indian exchange fell to approximately 1*s*. 4*d*.

The established legal standard of money payments should only be disturbed under stress of overwhelming necessity. Round it an immense volume of contractual obligations has been built up. No evidence has been produced showing that any supreme need for the alteration of this standard has arisen, or that any insurmountable difficulty exists to prevent its restoration. Whilst no special sanctity establishes to a ratio as a ratio, the standard for money payments should be, and usually is, regarded as less open to repeal or modification than perhaps any other legislative act.

On this general principle, that the established legal standard of money payments should not be disturbed, no departure from the goal of Indian currency policy, from 1893 until the financial disturbances of the war, is warranted, except on proof of overwhelming necessity or evidence that it cannot be maintained.

(4) The gold exchange standard practised before the war should be abandoned for a definite gold standard, aiming at the ultimate establishment of a gold currency, if when that stage is reached opinion in India demands it.

The Gold Standard Reserve should be located in India and held chiefly in gold.

(5) The note issue is efficiently managed by the Government of India through the present agency. That system should not lightly be disturbed. If for any special reason it is desired to bring the note issue more directly under control in India, then it should be vested in the Imperial Bank of India, as an entirely separate department of the Bank, and under conditions which will not admit of any considerable departure from present practice.

Notes of small value, such as the one-rupee note, have many advantages. They are popular; they form a line of defence against any manipulation of the silver market in face of a demand for the coining of rupees. They should, therefore, be retained, if only on a limited scale, so that people may be habituated to their use.

(7) The remittance operations of the Government of India should be conducted by the Imperial Bank of India, through the purchase of sterling in India, and limited to meeting the Home charges of the Government of India.

(9) Any silver required by the Government of India should be purchased by open tender in Bombay.

APPENDIX 86.

Statement of evidence submitted by Mr. George E. Roberts, Vice-President, National City Bank of New York, and formerly Director of the United States Mint.

1. The bankers of the United States, myself included, are interested in the work of this Commission as preparatory to the re-establishment of the gold standard in India on a definite and permanent basis. We believe that this is highly desirable from the standpoint of the people of India and as a part of the general movement for the re-establishment of the gold standard throughout the world as the basis of trade and financial relations. I need not dwell upon the benefits to be gained by all countries from the restoration of a common standard of value—the experiences of the last 12 years have afforded ample demonstration of the evils resulting from unstable currencies and exchanges. In the United States it has happened that we have had no difficulty in maintaining our currency at par with gold, but we have seen that the

full advantages of the gold standard cannot be enjoyed by one country alone. We have found that even our internal prices and the prosperity of all our industries were affected by the loss of a stable relationship between our monetary system and the systems of other countries.

2. We are interested, therefore, in the reconstruction of the universal gold system as something generally desirable; but, since this means demands for gold from many countries, we are interested also that these demands shall not interfere one with another or seriously affect credit conditions in the countries which are expected to supply gold. I am old enough to remember that 30 or 40 years ago there was much talk about a "scramble" for gold and of falling prices commonly attributed to a scarcity of gold. That situation was changed by a great increase in gold production. Through the development of the South African and other goldfields the banking reserves of the world were replenished, and from about 1897 world prices were rising until the outbreak of the war, after which the inflation of credit became the dominant factor. The rise of mining costs then had a tendency to curtail gold production, particularly in countries like the United States, where gold had to be sold at the mint price as before the war, and the world's output declined from a value of about £96,400,000 sterling in 1915 to about £69,300,000 in 1919 and £65,500,000 in 1922, the low figure of the latter year being due in part to a miners' strike in the Transvaal. Since then the Transvaal has been quite successful in reducing costs and has completely regained its pre-war rate of production, but other important fields, particularly in the United States and Australia, have not been so successful. In 1924 the world's output was about £80,000,000 sterling, and that of 1925 was perhaps slightly higher. The world's production therefore has recovered about one-half of the decline occasioned by the war, but is about £15,000,000 below the production of 1915. I am inclined to the opinion that the prospective supply of new gold is large enough to permit the general re-establishment of the gold standard without serious disturbance to prices, provided possible economies in its use are effected, and the new stocks wanted are acquired without too much disturbance of existing stocks already in use as the basis of credit. These, however, are necessary qualifications, and it is especially important that the new demands shall be satisfied from current production.

3. The war caused an enormous expansion of credit and a great displacement of gold stocks. The gold reserves of the banks of issue and Government conversion funds have been increased from approximately 5½ billions of dollars, or roughly £1,100,000,000 sterling, to approximately £1,900,000,000, or a little above 70 per cent. This is an increase somewhat greater than the rise of the general price level as it stands to-day, but the banks are carrying unusual amounts of Government paper as compared with pre-war days. It must be considered also that the increase in gold reserves has been by no means all from the mines, but largely by the accumulation of coin that had been in circulation. Moreover, this increase in the gold reserves means that larger additions to the reserves will be required in the future to maintain a percentage increase corresponding to the growth of trade. Thus a 2 per cent. annual increase upon £1,000,000,000 of reserves would call for £20,000,000 of new gold, while a 2 per cent. increase upon £2,000,000,000 of reserves will require £40,000,000 of new gold. I am not saying that a 2 per cent. annual increase is required, but I am pointing out that if the price level is to be maintained at approximately 50 per cent. above the pre-war level, larger gold reserves will be required in the future and economy in the use of gold will be necessary. If there should be an expansion of business over the world and at the same time a general replacement of gold coin into circulation, the gold reserves probably would not be sufficient to supply the amount of credit necessary to maintain the present price level. In my opinion it would be a mistake at this time to afford facilities anywhere for gold to be absorbed into circulation.

4. The distribution of gold stocks at this time is very uneven. As a result of war and revolution the great reserves of Russia (which aggregated about £160,000,000) have been scattered. The reserves of the Austro-Hungarian Bank (which were about £50,000,000 sterling) were much reduced during the war, and what was left finally distributed to the succession States. The reserves of the German Reichsbank were greatly reduced following the war, but within the past year have been restored to approximately their pre-war strength. This does not, however, fully restore the pre-war monetary and credit situation, as before the war a large amount of gold coin was in circulation which must now be replaced by Reichsbank notes, thus increasing the charge on the gold reserves. Since 1913, excepting Belgium, France, and Portugal,

the gold reserves of Western Europe have been largely increased. This is true also of the reserves of Switzerland, but those of the other countries of Central, Eastern and South-eastern Europe have been reduced. Those of Italy have been reduced by more than 20 per cent.

5. Gold is the most liquid form of capital, the form most suitable for use as the basis of commercial credits; and it is evident, from the high bank rates now prevailing throughout Central and Eastern Europe, that credit is very scarce throughout that region. Gold is needed in all those countries to permit credit expansion, to lower interest charges, and to stimulate a revival of trade and industry.

6. About a year ago the Bank of England resumed gold payments, accompanied by the Netherlands Bank, and this action was hailed as possibly inaugurating a general return to the gold basis throughout Europe. The results have been in some degree disappointing, although not wholly so. Poland attempted to establish her currency on a gold basis and obtained a loan in America, but the conditions were too unfavourable, and the new currency has suffered a heavy depreciation. Belgium has sought to do the same, but has not been able as yet to carry out her plans, and her currency has relapsed. She will need a substantial foreign loan to achieve success. The currency of France has suffered further depreciation during the year. She does not need to increase her gold reserves at home, but she will need credits outside which will be a charge upon the reserves of the countries granting them. The Chervonetz currency of Russia, issued by the State Bank on a gold basis, and said to be independent of the Government finances, is now reported as suffering depreciation. If and when Russia comes back into the world of business (as it is to be hoped she will without long delay) she will need important help from outside in the establishment of a stable currency.

7. The Bank of England has lost approximately £9,600,000 since the resumption of gold payments, and the management feels it prudent at this time to maintain a discount rate which is somewhat above the ordinary rate in pre-war times, and to that extent must be regarded a burden upon the industries of the country at a time when they are needing to have all conditions as favourable as possible.

8. The Bank of the Netherlands, which resumed gold payments coincidently with the Bank of England, also has lost gold during the year to the extent of about £5,000,000. Switzerland, which is on a free gold basis, has lost about £1,500,000 during the past year. Sweden, also on a gold basis, has lost a small amount of the metal during the year.

9. On the other hand, Hungary has successfully re-established a new currency on a gold basis by the aid of a foreign loan, and Czecho-Slovakia, with similar assistance, has established a national Bank of issue with every prospect of being able to maintain her currency on the gold basis. Germany, by means of the Dawes plan loan and extensive borrowing by industrial and municipal corporations, has increased the gold stock of the Reichsbank by about £43,000,000, of which £17,000,000 was acquired in 1925.

10. The United States lost about $134,000,000 during the year 1925.

11. It is evident that the movements of gold during 1925, and down to this time, have been on the whole away from the chief financial centres and to what may be called the outlying countries. India took about £43,000,000 sterling during the calendar year 1925, which, however, refers to net imports and not to gain in banking reserves. Australia and New Zealand reserves increased £13,000,000 sterling; Java gained about £4,000,000, Canada £3,500,000, Poland £1,200,000, and numerous countries such as Italy, Hungary, Roumania, Yugo-Slavia, Bulgaria, Austria and Belgium gained small amounts.

12. This movement away from the chief financial centres is nothing to complain of. It is all right and illustrates the part which they play in the ultimate and inevitable distribution, but also illustrates the general interest in having the centres kept strong to meet the demands from all quarters.

13. Whatever loans are required for the rehabilitation of monetary systems naturally must be made in the countries which have surplus capital for investment abroad, and banking reserves must exist there to meet the demands which such loans make.

14. There are only three countries at the present time which are in a position to participate to any considerable extent in foreign loans. They are Great Britain, Holland, and the United States.

15. Great Britain by reason of past experience and relationships, is the natural leader in international financing, particularly in behalf of any of her Dominions, excepting possibly Canada. I have already referred to the position and present discount rate of the Bank of England. I would not even suggest the possibility of Great Britain's again suspending gold payments, for I do not think the world can afford to have that occur. It would be a world-wide calamity. The Bank of England must maintain gold payments at any cost, as the centre and mainstay of the movement to accomplish world-wide resumption, but a discount rate which is a restriction upon British commerce would greatly hamper the Bank in its co-operation to that general purpose.

16. Holland is able to co-operate, and always has shown a disposition to do so, but cannot act alone upon large undertakings.

17. The United States has gained the greater part of the increase in gold reserves since 1913, the net increase in the holdings of the Treasury and banks having been nearly $2,500,000,000 (£500,000,000) or about 60 per cent. of the world's increase. It has been a common assumption that the United States has a great surplus of gold, and even was in danger of being smothered by it or compelled by the natural processes of inflation to give up a large part of it. However, the United States is a big country and has large digestive capacity. It is a mistake to suppose that the United States has any considerable excess of gold reserves at this time. At the present price level and with the present volume of credit outstanding, the reserves of the United States are no greater than the financial authorities of the country deem reasonable, conservative and desirable.

18. In July 1914 the gold holdings of the Treasury and banks equalled about 7 per cent. of the aggregate amount of credit currency in circulation together with the net individual deposits of the banks. At this time they do not exceed 8 per cent. A similar calculation for Great Britain shows a net reserve of about 6·5 per cent. The percentage is higher in the United States than in Great Britain, but, in our opinion, there are sound reasons why this should be. The United States is of great territorial expanse and no such concentration of banking control exists there as in Great Britain. It has a great number of small banking institutions which look to the reserve banks for support. The country has had several unpleasant experiences in the past with general bank panics, the one in 1907 causing an almost complete suspension of cash payments throughout the country. This was before the establishment of the reserve system, but individual bank failures have been not infrequent in the last five years.

19. The reserves are divided among 12 reserve institutions. The reserve percentages of the reserve banks are high, but they are calculated upon the liabilities of the reserve banks alone, and these banks do not participate in the general banking business of the country. It must be considered that these reserves are practically the only reserves for the entire banking system.

20. Moreover, it has to be considered that the central reserve system is comparatively new with us, and in view of the small participation of the reserve banks in the total banking business it is not altogether certain to what extent they will be able to control the banking situation.

21. In view of the unsettled conditions in world trade and finance still existing, we do not feel that present reserves in the United States are excessive.

22. I have thus gone over the general situation preparatory to expressing my opinion of the proposal for establishing the full gold standard system in India, as outlined in the plan which has been handed to me by your Chairman. Whatever opinions I express are based upon this plan and the estimates which are made therein. I do not feel that I have sufficient knowledge of conditions in India to express an independent opinion upon the amount of gold required or of the amount of silver which will have to be taken from the public and disposed of.

23. Accepting the estimate that £103,000,000 sterling of gold will be required over and above the usual imports of past years which have been absorbed for ornaments and other private purposes, and that approximately £50,000,000 of this will be required within the first year, I am of the opinion that the plan will subject the financial world to a strain which ought to be avoided, and I see no reason why it may not be avoided. It appears that after supplying the demand for the arts and the amount which went to the outlying or non-lending countries, none of the new

gold production of last year was available to swell the reserves of the lending countries. In fact, we know that these countries all suffered losses from their reserves in the past year. Evidently a special call for £50,000,000 sterling, or approximately $250,000,000, could not be met without being drawn almost wholly from their reserves, which would necessitate drawing in their resources and curtailing credit both at home and abroad.

24. Gold obtained by means of a loan will not necessarily come from the country or countries in which the loan is placed or in the same proportions. The movements of gold are determined by many conditions. If, for instance, a loan was placed in the United States, it might be advantageous to use the credit there to buy gold in London or elsewhere; or if the gold was originally taken from the United States the effects there might cause Americans to withdraw capital from other countries. The financial world is so closely related that wherever the loan is placed or the gold obtained the effects will be felt in all countries.

25. It would be very unfortunate at this time to have a forced contraction of credit anywhere. It would increase interest rates: but this would not be the worst of it, because the very purpose of increasing rates would be to force a curtailment of applications for capital. It would tend to increase unemployment and to lower the general price level; and, while there are good reasons for regretting the great rise of prices occasioned by the war, and the injustice and hardship thus inflicted upon many people, it is too late to remedy all that now. The high price level has been maintained so long, and such a vast body of indebtedness has been created upon that basis, that to force adjustment to a lower level would repeat all those evils with the added danger of protracted industrial depression and widespread social disturbance.

26. India necessarily has a common interest with other countries in the maintenance of general prosperity. She is a large exporter of products, mainly raw materials of industry, the prices of which are affected by the general state of industry over the world. The experience of the last five years has been that in any general decline of prices, raw materials and agricultural products have fallen faster and farther than manufactured goods. I know that this has been the case in the United States, and my information is that it has been true in India and elsewhere. It may be accepted as a general rule, resulting from the fact that the manufacturing industries are highly organised and resist wage and price reductions while the rural populations are unable to do so.

27. I do not believe that a gold circulation is essential to the maintenance of the gold standard in India with all the benefits that go with it anywhere. The essential thing is that the currency in circulation, and which the people receive in payment for wages and products, shall have a stable relation to gold and be readily convertible into gold for all the foreign payments they wish to make.

28. The fact is that in all the advanced countries the trend is away from the use of gold as a common medium of exchange, and even away from paper money for payments of any size, to the use of bank checks. For pocket change, wages, and retail trade, a token currency answers every purpose. Gold is too valuable for use in hand-to-hand payments, to be kept in the pockets or hoarded by millions of people in any country. It is a waste of capital to use it in that way. It is a backward rather than a forward step to provide for gold coins in circulation.

29. I do not believe that the countries of Europe ever will go back to the common use of coins. In the United States the use of gold coins continued for many years in the Pacific Coast States, because gold was one of the products of those States, the people were accustomed to handling the coins, and were reluctant to change their habits. Since the war, however, gold has gone generally out of circulation even there, and a gold coin has become a rarity in any part of the United States. More and more our people are making their payments through the banks.

30. I am aware that with the mass of the people of India payments are too small for the use of checks, but I should think that this would be true also as to gold coins.

31. I hesitate to express my opinion about matters with which I have so little personal knowledge as conditions in India. I know that it is a country in which changes in long-established customs take place slowly, but I am profoundly impressed that no country is in a position to effect so rapid a betterment in social conditions as India might accomplish by the development of a modern banking system. If the capital held unproductively in that country could be gathered

together and invested for the development of industry, the wealth of India would rapidly increase: the incomes of all the people would increase, and the country would enter upon a new era of general prosperity.

32. I do not assume for a moment that I am advancing an idea that is new in India. On the contrary, I have been moved to say what I have by knowledge of the fact that the Imperial Bank of India now has 100 branches in operation. I hope the results will afford encouragement for opening many more, and that the services they will render will gradually bring about a change through which the wealth that they win by their constantly accruing trade balances, instead of being buried in idle hands, may be used to provide them with a more abundant supply of the comforts of life.

33. The growth of banking facilities seems to me the hopeful line of development for India, and to properly take precedence over an increase of facilities for the widespread distribution of gold coin.

34. I would not suggest that the interests of India be sacrificed in any way for the benefit of the rest of the world, but I am impressed that in the present situation the problem of restoring the world to the gold basis is dependent for success largely upon India; and I am sure that success will serve the interests of India as well as those of the other countries.

The Redemption and Sale of Silver.

35. I now come to the part of the plan which deals with the disposition of about 200 crores of rupees, or approximately 687 million fine ounces of silver, for the double purpose (as I understand) of eliminating rupees which it is thought will be redundant as a circulating medium under the new system and of obtaining gold for the reserves. This will be regarded in the United States and all silver-producing countries as a very disturbing proposal.

36. The silver question has been a very live question in the United States for a long time: for many years it was an acute political question. This was not due entirely or even mainly to the fact that silver-mining was an important industry in the country, but largely to the fact that the monetary system had been, nominally at least, bimetallic from the foundation of the Government, and that popular opinion inclined to the view that the demonetisation of silver tended to lower the general price level, and to operate to the disadvantage of a debtor country and the debtor class generally.

37. All political parties for a time were more or less committed to the view that bimetallism should be maintained, and both of the leading parties participated in the legislation under which approximately 400,000,000 ounces of silver were purchased by the Treasury, from 1878 to 1893, and coined into dollar pieces of unlimited legal tender on Government account. Those purchases have seemed to us to aggregate a large amount, but it does not sound so large in comparison with this proposal for India to sell 687 million ounces.

38. This silver-purchase policy was for the purpose of maintaining the value of silver bullion with the view to the re-establishment of full bimetallism.

39. The increasing production of gold answered the principal argument on behalf of bimetallism, and gradually the subject ceased to be a political issue. However, people are tenacious of political doctrines to which they have adhered, and with many of our people there has remained a strong sentimental interest in silver to this day.

40. As evidence of this I would point to what is known as the Pittman Act, passed in 1918, under which several hundred million silver dollars held in the Treasury were authorised to be melted and sold to the British Government or to our own importers, as a means of making remittances to India at a time when exchange was very difficult to obtain. The object for which that silver was purchased and those dollar pieces had been coined had been long since abandoned. The coins represented an unavailable asset in the Treasury which, from the point of view of Government finance alone, naturally would have been disposed of, but the "spell" of the old purpose, together with the appeals of the mining industry, which urged that sales would demoralise the industry, were sufficiently strong to secure the incorporation into the Pittman Act of a provision requiring that all of the bullion resulting from the melting of these coins should be repurchased in the event of silver's falling to \$1 per ounce, and recoined into dollar pieces. All of it has been now repurchased.

41. I think this background of silver history is necessary in order to understand just how a considerable section of the American people will react to this proposition to sell 685,000,000 ounces of Indian silver coins with a view to completing the

demonetisation of silver in India. It will be regarded as the finishing act in the demonetisation of silver in the country which has afforded the greatest market for it in the past.

42. It goes without saying that the silver-producing industry will hear of this proposal with dismay. The total production of silver in the world is now at the rate of about 240,000,000 fine ounces per year, of which India has been accustomed to take about one-third, and in the last three years has taken close to 100,000,000 ounces per year. Of the world's production the United States contributes about one-fourth, the figures for the last two years being about 65,000,000 ounces each, and the United States, Canada, and Mexico contribute approximately 73 per cent.

43. What is to be done with an annual production of 240,000,000 ounces of silver when the country which has been taking 100,000,000 ounces of it drops out as a buyer, and becomes a seller on a large scale?

44. I think this question expresses what the natural reaction will be, although I am not clear that the situation would be quite so bad as it indicates, for I suppose that the demand for silver for ornaments would continue upon some scale, and that eventually there would be some use of silver for subsidiary coins. It would seem probable, however, that confidence in silver as a store of value, and respect for it as one of the precious metals, would be more or less shaken, and that private purchases would be affected thereby.

45. At best the proposition is certain to be regarded by the mining industry with very great alarm, and, if approved by this Commission, to have a very serious effect upon the value of investments aggregating hundreds of millions of dollars.

46. Even if sales by India abroad be left out of the account, and these 687,000,000 ozs. should be simply held to be gradually absorbed by home consumption, it is difficult to see how the current production could be disposed of outside of India. China is the next largest purchaser, but a heavy fall in the value of silver would work serious derangement in both the internal and external trade of that country.

47. The purchases of silver by Governments for coinage purposes always have represented the principal consumption, but they would not be increased in any important degree by a lower price.

48. It should be noted that there has been a pronounced tendency amongst Governments in recent years to lower the fineness of their silver coins for the purpose of cheapening the cost. Thus the British Government has lowered the fineness of its silver coins to 50 per cent. It seems quite probable that this practice will extend farther. In other cases nickel has been substituted for silver as in the case of some of the coins of France. These developments discourage the hope that the demand for coinage purposes will increase.

49. The cost of the silver used for table-ware and ornamental purposes is subordinate to the labour factor in the cost of manufacture, so that while a lowering of the price of the metal might stimulate such use in some degree, price reductions to consumers would not be proportionate to reductions in the price of silver bullion.

50. When the production of any commodity is in excess of the demand there can be no relief until the price falls to the point where diminishing production and increasing consumption bring supply and demand into equilibrium. It looks in this case as though the adjustment would have to be mainly on the side of supply.

51. The statement of the plan makes an estimate that the price obtained may be expected to be not less than 24*d.* per standard ounce. The market price in London this week for spot silver has ranged from $29\frac{1}{4}$*d.* to $29\frac{3}{4}$*d.* I do not know that silver for sale in India for export would bring more than in London. This would contemplate a fall of about 6*d.* as the result of the announcement of the plan and the actual sales. It seems to me that this is a small decline to expect under the circumstances. The first big break in silver occurred in the early seventies of the last century, when Germany and several other countries were demonetising it as standard money. Germany sold in all about 85,000,000 fine ounces from 1873 to 1879 and obtained $59\frac{5}{16}$*d.* in the first year and 50*d.* in the last, a drop of $9\frac{5}{16}$*d.* in the six years. It may be added that the German Government got better than the lowest prices in these years: the lowest price recorded on the London market in that period was $46\frac{3}{4}$*d.* in 1876, which was a drop of 13*d.* in three years.

52. The next decline in silver occurred in the 12-year period following 1890. About the latter year agitation began for closing the Indian Mints to free coinage. The

highest price for silver in 1890 was $54\frac{5}{8}d.$ and the lowest $47\frac{3}{4}d.$, a difference of nearly $7d.$ In 1892 the high was $43\frac{3}{4}d.$ and the low $37\frac{1}{8}d.$; in 1893 when the Mints were closed the high was $38\frac{3}{4}d.$ and the low $30d.$; in 1894 the high was $31\frac{3}{4}d.$ and the low $27d.$; in 1897 the high was $27\frac{13}{16}d.$, and the low $23\frac{5}{8}d.$; and in 1902 the high was $26\frac{1}{16}d.$ and the low $21\frac{11}{16}d.$ Thus in three years the price fell from $54d.$ to $27d.$, exactly one-half, and before it stopped falling it got under $22d.$, which was $2d.$ below the price named as the minimum to be realised on the sales under this plan.

53. There was no talk of selling silver out of India at that time; simply a fear that the importations might be reduced. As a matter of fact the net importations of silver into India since 1893 have been larger on the average than before that year, but instead of the coinage being free or on private account it has been on Government account.

54. I would also call attention to the fact that this great decline in the price of silver did not cause any falling off in production. The world's production of silver in 1892 was 153,000,000 ounces, and it has not been so low as that in any year since.

55. Silver sold below $24d.$ not only in the years I have named, but in 1905, 1909, 1910, 1911, 1914, and 1915; in all, 10 years out of the last 25. I am unable, therefore, to accept the opinion that $24d.$ is a price that will reduce production to the point where supply and demand will find an equilibrium with India no longer a purchaser in the markets.

56. Unquestionably the lower prices of silver which have prevailed since 1890, excepting in a few years of war disturbance, have closed many silver mines, but others have continued to operate at a profit. Mining and treatment costs have been reduced in the last 30 years; rich mines have continued to produce, and new ones have been discovered; but one of the chief reasons for the increased production of silver, despite the lower prices, is that a large part of the production is now in conjunction with the production of other metals; in fact, silver is largely a by-product of mining operations in which copper, lead, and zinc are the chief products and bear the larger part of the expense.

57. The report of the Director of the Mint of the United States for the fiscal year ended 30th June 1925 (page 33) contains a table furnished by the Bureau of Mines, which gives the source of the silver production of the United States in the calendar year 1924. It accounts for over 64,000,000 fine ounces, of which 23,000,000 were recovered from copper ores, 20,500,000 from lead ores, and 20,000,000 from what are called dry and siliceous ores, being those from which nothing is recovered but silver. A small amount of silver is obtained also in conjunction with gold.

58. According to these figures less than one-third of the silver output of the United States in that year was obtained from mining operations in which the chief product was silver. The same is largely true of silver production in Mexico and other countries.

59. It is evident that silver production from this class of mines is not likely to be as readily responsive to changes in the price of silver as production from what are called straight silver mines. The net profit of operating these mines depends upon the combined results, and upon the prices of copper and lead and zinc as well as the price of silver.

60. It is a very difficult matter to say at what figure the price of silver will be low enough to close an important proportion of these mines. There are men sufficiently familiar with such properties to give opinion worth having, but I would not attempt to give an opinion other than that I think the figure would be considerably below $24d.$

61. It is to be considered that mining properties are not abandoned whenever their operations show a deficit according to approved book-keeping methods, which include charges for depletion of mineral, depreciation of equipment, bond interest, &c. Under the conditions here presented mines will be operative as long as they pay operating costs, and possibly, in some instances, even longer, in the hope of a favourable turn with regard to some of the factors. If there is no hope as to silver there may be hope as to copper or lead. With silver now under $30d.$ I do not think a drop to $24d.$ would reduce production enough to off-set the withdrawal of India from the markets.

62. The fact that so much uncertainty attaches to this feature of the plan makes it very important, as I view it, that the best expert opinion on the subject be had by the Commission before coming to a conclusion. If silver should fall to $15d.$ instead

of 24*d.*, it is evident not only that the sales of redeemed silver would yield much less for the replenishment of the reserves, but that the decline would signify a heavy depreciation upon all the silver hoards of India. I leave it to others more familiar with the psychology and habits of the Indian people to estimate what effects there might be in the way of inducing a more rapid conversion of silver into gold than has been contemplated, or of general discontent with the new system, or of influencing the people to the purchase and hoarding of gold instead of silver. With what we know of human nature in the United States we would expect developments on all these lines.

63. For reasons which I have outlined in the first part of my discussion I would consider the last-named possibility one of great importance to the world at this time. The people of India have been buyers of silver on a great scale for a long time. They have been accustomed to esteem it as one of the precious metals, and it would seem that the reduction of the rupee to be a subsidiary coin and a further serious decline in the price of bullion naturally would have the effect of lessening the demand for all the purposes for which silver has been wanted in India, and of increasing the demand for gold. Furthermore, this probably would be true as to many uses the world over. I do not think the world can afford to encourage or satisfy such an increase in the non-monetary uses of gold at this time.

64. The one certainty as to the price of silver in the event of this plan's adoption would seem to be that it must fall low enough to effect the curtailment of production necessary to bring supply and demand into the balanced relation. I do not see how this can occur without closing an important proportion of the properties in which silver is produced in conjunction with the other metals, and if this result is forced the disaster throughout the mining industry will be enormous.

65. Although silver is a minor factor in the income of this class of properties, my understanding is that it supplies all of the profit and bears a part of the expense. Whether the required curtailment would be accomplished at 20*d.* or 15*d.* is not important if it be true that this class of mines must be largely closed before the decline can cease. This would mean a very great destruction of property values, a grave displacement of labour, and probably higher prices to consumers the world over for copper, lead and zinc.

66. The latter possibility has various phases. A general cessation of operations by the silver-lead and silver-copper companies would force up the price of lead and copper to a point where increased production would be induced from some source, and some of the closed properties might be enabled to resume operations at even lower returns for silver than have been suggested in this discussion. This would put more silver on the market, and thus readjustment might go on until what in the past have been considered the humbler metals bore practically all the cost of producing silver. On the other hand, there is the possibility that low cost copper producers in South America and Africa might expand their operations at the expense of their North American competitors, many of whom have been able to hold their own in the past largely by reason of the silver contents of their ores.

67. The value at this time of the mining properties in the United States which would be put in serious jeopardy by this plan probably is not less than $500,000,000. Higher figures have been named to me by men whose opinions are entitled to as much weight as any that can be had on this subject. Many thousands of workmen employed by the mining, smelting and transportation companies would be involved. The ramifications of the effects of the closing down the various operations upon ores producing silver, lead, copper and zinc, are far-reaching.

68. Moreover they would not be confined to the United States, for the mines are in many countries, and a disaster to this industry at the present time obviously would be unfortunate for the influence it would have upon general industrial and business conditions throughout the world.

69. I am sure that no such ill-effects are contemplated or desired by the sponsors of this plan, and I am confident that this Commission will recognise that the problems involved in it are too complex, and the issues too serious for action to be taken without the most exhaustive investigation into the conditions which I have outlined.

70. In conclusion, I would repeat that in speaking of silver production I do not wish you to understand that I am an expert upon the mining industry. I am not a mining engineer, nor engaged in mining, but during the years of my incumbency of the position of Director of the Mint of the United States it happened that I had the

opportunity to become somewhat acquainted with gold and silver production. I prepared the statistics upon the subject which appear in the Mint Reports of those years. I have known many of the men who have been prominent in the mining industry in the United States, and I have felt justified in laying before you the general information which thus has come into my possession. For more exact information it will be necessary to have testimony from persons intimately related to the industry. My statement is for the purpose of emphasising the importance of having such testimony before acting upon this proposal to sell large amounts of silver from India or to make any further change in the policy of India regarding silver.

APPENDIX 87.

Report on proposal to place India on a Gold Standard, by Mr. Arthur Notman, Mining Engineer and Geologist, New York.

The method of putting this proposal into effect may be outlined as follows :—There are in the currency reserve of the Indian Government and in the silver rupees in circulation, which will be presented for redemption in gold, the equivalent of 687,000,000 fine ounces of silver. It is proposed to release this total in equal annual instalments over a period of 10 years, which would be equivalent to an increase of about 30 per cent. in the present available annual supply of 240,000,000 ozs.

Far-reaching Effects.

The effects of such action would be far-reaching throughout the non-ferrous metal industry of the world. The burden of these effects would fall, in large part, on that portion of the industry owned in the United States. The larger share of the domestic burden would fall upon the lead industry, together with the consumers of that metal. Copper, too, would be materially affected, whereas the zinc industry would be little disturbed.

Basis of Value.

In the past the price of silver has reflected any reduction in its use for coinage purposes and will doubtless continue to do so in the future. The world's stock of silver in all forms is steadily increasing. With a growing volume of trade between the Orient and the gold standard nations of the West the reverence for the metal as a symbol of value will gradually disappear. The present agitation from India is evidence of this tendency. Regardless of any governmental action, this cannot fail to have a depressing effect on consumption in the East.

Growth of World's Stock of Silver.

As we shall see, an increasing proportion of the total production is a by-product of the base metals. In view of the growing demand of the world for the latter metals, solidly based on manifold industrial uses, the world's stock of silver seems destined to increase even more rapidly than in the past. It is idle to suppose that in the face of these forces even the world-old sentiment of the Orient for the metal will successfully hold back economic law.

World Production.

In the years 1923 and 1924 the world produced 480,000,000 ozs. of silver, for which it paid approximately 65 cents per oz., or $312,000,000. This production was divided as follows :—

SILVER PRODUCTION OF THE WORLD, 1923–4.

Millions of Ounces.

United States	130	Europe	19
Canada	39	Oceania	25
Mexico	182	Asia	21
Central America	6	Africa	3
South America	55		
Total Western Hemisphere	412	Total Eastern Hemisphere	68

Grand Total, 480.

Sources of Domestic Production.

North America accounted for 73 per cent. of this output, and United States investors received the benefits derived from at least 300,000,000 ozs. The United States production was obtained from the following sources: from straight silver ores, 43 per cent.; from lead ores and lead ores carrying a little zinc, and/or copper, 35 per cent.; from copper ores, 20 per cent., and the small remaining balance from zinc ores. The world figures represent a record for silver. This is true, also, for the lead production. In the case of copper, the output in the war years 1917–18 exceeded that of 1923 and 1924 by about 6 per cent., but the latter years made a peace-time record.

The volume and trend of domestic silver production, and their relation to those of the base metals, are brought out in the accompanying Charts 1 and 2. World figures, if available, would in all probability show similar relationships. The evidence, so far as base metals are concerned, points strongly to still rapidly rising production and consumption. At the moment stocks of these metals are if anything below normal, showing that consumption has fully kept pace.

Domestic Consumption.

The domestic consumption of silver for the 12 years 1912 to 1923 inclusive, according to the American Bureau of Metal Statistics, was 663,000,000 ozs. Of this 41·6 per cent. went into coinage and 58·4 per cent. into manufacturing and the arts. One-quarter of the latter amount was derived from old scrap, and the balance from new material.

The principal industrial uses are silver ornaments, plating, photography, and the chemical industries. It should be remembered that aside from the small amounts actually consumed in the two latter industries, and the amounts lost by physical wear and tear on coins and ornaments or accidentally, the total stock is augmented each year by the annual production. In other words, the metal is practically indestructible. There are no statistics available to comprehend this condition. Presumably the great bulk of all the silver that has been produced since the beginning of time is still in existence in one form or another. Most of it, however, is performing no essential service.

Domestic Industrial Consumption.

No reliable figures other than those for the United States covering industrial consumption have been compiled. The per capita domestic industrial consumption has remained nearly stationary at ·32 of an ounce for the last 16 years. Its relation to the per capita consumption of the base metals, copper, lead, and zinc, is shown by the American Bureau of Metal Statistics as follows:—

Per Capita Industrial Consumption—United States.

	Silver.	Base metals.
For the three years, 1912–4, inclusive - -	·31 ozs.	23·52 lbs.
„ „ 1922–4, „ - -	·32 „	30·75 „

It seems probable that the industrial consumption of the nations of western Europe would bear somewhat the same relation to their consumption of the base metals as is apparent in this country. Unfortunately, our classification does not show what part of our industrial consumption depends on mere appearance and sentiment and what on valuable physical, chemical, or electrical properties peculiar to silver. However, it seems likely that the former considerations form the basis for the larger part of this consumption. It is not without significance that silver ornaments are stamped with the sterling brand to distinguish them from those made of many equally attractive but much cheaper base metal alloys.

Current Costs of Silver and the Base Metals.

An examination of the attached cost data, Tables I and II, for the years 1923 and 1924 throws light on this question. These data have been assembled from the

published annual reports of a group of representative silver producers. The strictly domestic companies had an output for the two years in excess of 75 million ozs., approximately 58 per cent. of the total domestic output.

In the preparation of the tables the production has been classified as follows:—(1) Geographically into domestic and foreign, and (2) according to the nature of the ores from which the silver is derived. The latter classification serves to separate that portion of the production which is mined essentially for its own value and/or that of associated gold from that secured as a by-product in the extraction of base metal ores. Straight zinc ores carrying silver have been disregarded for the reason that the production derived from them amounts to but 2 per cent. of the total.

Silver and Silver Gold Ores.

Table I shows that in the case of these ores a reduction in the price of silver of the 1923–4 average of about 65 cents per ounce to 45 cents would reduce the distributable margin before depletion from 30 cents to 10 cents per ounce, or $66\frac{2}{3}$ per cent. Out of this distributable margin provision must be made for the return of the capital investment with interest before there is any real mining profit. It is difficult to arrive at any satisfactory figure for the average investment per ounce of annual production in the case of these producers of straight silver ores. The reason for this is that the usual and justifiable conservative policy followed by them involves the charging out of these investments rapidly against earnings during the early history of the properties. Perhaps $1.00 per ounce of annual production would be a fair estimate of the amount of capital required. To insure its return with interest over the life of the deposits the annual yield should be 8 to 10 cents per ounce. In reality, therefore, when the distributable margin falls to this figure, there are no profits.

Base Metal Ores.

Companies faced by such a condition usually continue to produce even after this "living wage" has disappeared, in the hope that better prices, richer ores, lower cost, any or all will enable them to hold their heads above water. These considerations apply, with equal force, to the silver lead and silver copper producers. It is probable that there would still be some production from the first group after the price reached 20 cents per ounce. Selective mining of ores higher in grade than the average of the past might enable them to maintain a limited output with some distributable margin. Here, again, the same principle holds true for the producers of silver from base metal ores. With each successive drop in price all units would be affected, but in varying degrees. The most likely outcome would be that instead of certain units disappearing from the picture, as might be gathered from the tables, the production of each would be reduced. The combined effect of such reduction should approximate that which would be caused by the elimination of the higher cost units.

With these ideas in mind, a study of Tables I and II will give a picture of the effects of a falling price for silver on this particular group of producers. Table III should be studied with the others as it summarises these effects, assuming that the prices of lead and copper will remain at about the present level of 8 cents and 14 cents per lb. respectively. As we shall see later, this is not apt to be the case. To maintain the present requisite supplies of these metals in the face of falling prices for silver, their prices must necessarily rise. However, on any other assumption the picture would become too confused to hold any meaning.

It should be noted in the case of the Anaconda Copper Company that about one-half of their domestic investment is involved in activities other than that of producing electrolytic copper. Presumably, therefore, one-half of the margin shown is represented by income from these operations. Before comparison, therefore, with the other companies, the cost of their copper should be taken at about 11·75 cents. The case of the Utah Copper Company, representing over 25 per cent. of the copper production of the group, deserves special mention. Silver plays such a small part in their income that they would be practically unaffected. In all cases, the costs shown are after all credits and charges, excepting bond interest and depletion. Careful study of the history of the copper industry shows that the investment amounts to 40 cents per pound of annual output on the average. The figures for lead are not so

reliable, but indicate an investment of about one-half of this amount. If we assume that in general these properties have reserves of ore in the ground sufficient to maintain production for 20 years, an 8 per cent. annual dividend on these investments will yield 5 per cent. interest and an annual instalment which, reinvested at 4 per cent. compound interest will return the capital in 20 years. In other words, the capital charges amount to 3·2 cents per pound of copper and 1·6 cents per pound of lead. Naturally, those companies will continue to produce as long as they can earn any margin before these capital charges.

From the above it would follow that with lead at 8 cents per pound, when the cost as shown reaches 6·4 cents profit disappears, and similarly in the case of copper. With the metal at 14 cents per pound, when the cost reaches 10·8 cents profit vanishes. It is idle to suppose that production from these sources would then cease. We have already discussed the factors tending to maintain output under similar conditions in the case of the silver and silver gold ore. In that of the base metal ores there would be the added stimulus of the prospect of rising prices for these metals.

Estimated World's Silver Production at falling Prices.

It would seem essential for a proper view of silver production as a whole to attempt a quantitative estimate of the effects of this proposal in the light of those indicated on that portion of the industry for which we have figures. To do so, certain additional assumptions are necessary beyond that of constant prices for the base metals at their present level. For example, this would be a reasonable assumption, that the combined production of Canada and Mexico is obtained from the three classes of ore in the same proportions as that of the United States (for the latter, see Chart 2): namely, 43 per cent. from straight silver and silver gold ores (dry and siliceous and placer); 35 per cent. from silver lead ores; 20 per cent. from silver copper ores, and 2 per cent. from zinc ores. (Lead ores carrying minor amounts of zinc have been included with the lead silver group.) In general, the similar geological environment in these adjacent areas of the North American continent to that of the United States afford strong support for this assumption. To carry the assumption further and cover the balance of the world production is questionable, and yet, granting its validity with respect to the whole of North America, we have already covered 73 per cent. of the total production. Even a substantial error in this balance will be greatly minimised in the total. Table III, already referred to, shows how the silver production of our selected group would be affected by falling price, while Table IV shows the estimated effects on world production, assuming our sample to be representative and the necessary assumptions sound.

Balance between Production and Prices.

Just where the balance between production and prices of silver and the base metals would be adjusted is extremely difficult to forecast. In the absence of action such as that proposed in the plan under discussion, however, investments and metal prices can and will be gradually adjusted to changing conditions, without serious upset. On the other hand, the proposed action would unquestionably precipitate a most serious condition of affairs, with heavy losses to investments which amount in round numbers to 1 billion dollars in this country alone. An unavoidable sequel would be the loss of employment to many thousands of workmen by the enforced shutdown of mines, mills, smelters, refineries, &c.

While these facts apply more directly to the domestic situation, it is true that the effects would fall even more severely, proportionally, on Mexico, because of the fact that they produce 50 per cent. more silver, largely from lead-silver ores similar in nature to those of the United States.

Since 1904 the silver production of the Province of Ontario of the Dominion of Canada has amounted to over 350 million ounces, with a gross value of 225 million dollars. The average price received on this production was 63·66 cents per ounce. It must be obvious that if the future production can be sold at prices only from one-third to one-half of this figure, a tremendous injury will be done to the Canadian investments. The Western Hemisphere produces about 85 per cent. of the total world output. With silver at 20 cents, the income derived from this production would amount to 40 million dollars annually, compared with 130 million at the

present level. As already pointed out, the prices for lead, copper and zinc would inevitably be forced to a sufficiently higher level to compensate for this loss of income from silver. In my judgment, the increases necessary would amount to $1\frac{1}{2}$ cents to 3 cents per pound of lead to 1 cent to 2 cents per pound of copper. If we now apply these increases to the present rate of consumption in this country for lead and copper they will amount to an annual charge of 33 to 66 million dollars. There is danger that such an adjustment in price in the case of copper would result in the transfer of a material portion of the production to foreign hands, with consequent severe loss to domestic investments. The dangers of any sudden disturbance of the equilibrium among the factors controlling the welfare of the non-ferrous metal industry of the world are obvious. Our study strongly supports the view that the present proposal would constitute a major danger of this sort.

TABLE I.

Output and Costs of Principal Silver Producing Companies of the Western Hemisphere for the two years 1923 and 1924.

NOTE 1.—All data taken from published annual reports of Companies or Year Book of American Bureau of Metal Statistics.

NOTE 2.—Costs are taken after all credits and anchorages, excepting bond interest and depletion with exceptions noted below.

PRODUCERS OF DRY AND SILICEOUS ORES.	Production.	Cost before bond interest and depletion.		Gold credit.	
	Silver ozs.	Total. Dollars.	Per oz. Cents.	Total. Dollars.	Per oz. Cents.
United States:—					
West End Consolidated Mining Co.	1,912,088	640,905	33·52	—	—
Tonopah Mining Co.	3,956,025	2,125,987	53·74	470,000	11·88
Tonopah Extension Co.	3,612,018	1,301,389	36·03	900,000	24·92
Tonopah Belmont Co.	2,084,459	1,044,903	50·13	474,660	22·77
California Rand Silver	4,672,817	937,418	42·03	—	—
Total	16,237,407	6,070,602	37·38	1,844,660	11·36
Canada:—					
Premier Gold Mining Co.	5,961,933	2,004,859	32·63	5,173,275	86·77
Nipissing Mines, Ltd.	6,489,778	1,753,154	27·01	—	—
Keeley Silver	3,224,776	679,639	21·07	—	—
Coniagas	1,890,977	618,739	32·72	—	—
Central America:—					
N.Y. Honduras-Rosario Mining Co.	4,228,115	1,897,370	44·88	—	—
Mexico:—					
El Tigre Mining Co.	5,718,109	2,030,346	35·51	—	—
Amparo Mining Co.	2,463,215	792,332	32·17	1,092,920	44·37
Dolores Mines Co.	1,826,869	1,067,634	58·41	—	—

TABLE II.

Producers of Lead-Silver Ores.	Production.		Net cost of lead.		Silver credit.		Other metal credits.		Net income before bond interest and depletion.		Estimated cost of lead per lb. with silver at 40 cents an oz.	Estimated cost of lead per lb. with silver at 30 cents an oz.	Estimated cost of lead per lb. with silver at 20 cents an oz.	Estimated cost of lead per lb. with silver at 10 cents an oz.
	Silver.	Lead.	Total.	Per lb.	Total.	Per lb. lead.	Total.	Per lb. lead.	Total.	Per lb. lead.				
	Ozs.	Lbs.	Dollars.	Cents.	Dollars.	Cents.	Dollars.	Cents.	Dollars.	Cents.	Cents.	Cents.	Cents.	Cents.
United States :—														
Tintic Standard	7,819,757	94,044,030	3,556,055	3·78	5,155,183	5·48	—	—	3,721,774	3·96	5·89	6·72	7·60	8·48
Silver King Coalition	4,308,239	61,907,127	1,956,977	3·04	2,830,584	4·57	400,413	0·64	2,905,894	4·69	4·71	5·41	6·22	7·01
Park City Mining and Smelting	2,577,650	44,292,548	2,173,741	4·91	1,693,804	3·82	377,059	0·85	1,239,927	2·80	6·38	6·96	7·57	8·18
Hecla Mining Co.	1,880,714	65,538,455	2,306,107	3·52	1,454,101	2·22	—	—	2,929,613	4·47	4·37	4·66	4·95	5·24
Federal Mining and Smelting Co.	3,260,728	142,782,000	8,033,101	5·53	2,147,375	1·50	—	—	2,968,836	2·08	6·11	6·34	6·57	6·80
Chief Consolidated	6,562,209	48,329,981	2,548,816	5·27	4,583,371	9·48	844,561	1·75	1,144,522	2·37	8·92	10·28	12·03	13·78
Hunker Hill and Sullivan	2,430,782	142,706,864	5,945,715	4·17	1,743,512	1·22	—	—	5,034,570	3·53	4·64	4·81	5·14	5·47
Bingham Mines	2,041,118	18,816,600	802,276	4·26	1,341,593	7·13	331,665	1·76	529,906	2·82	7·00	8·08	9·22	10·36
Total	30,871,197	618,417,005	27,322,728	4·60	20,949,523	3·39	1,953,698	0·32	20,475,042	3·31	5·90	6·40	6·99	7·58
Canada :—		Lead, zinc, and copper.												
Consolidated Mining and Smelting Co. ...	7,034,758	410,973,494	15,246,811	3·71	4,641,391	1·13	761,780	0·18	7,584,151	1·85	4·14	4·31	4·50	4·69
United States and Mexico :—		Lead.												
*United States Smelting, Refining, and Mining Co.	46,892,544	195,605,694	7,315,308	3·74	30,726,339	15·73	13,031,536	6·66	7,738,828	3·96	9·79	12·19	14·68	17·17
Grand total	84,798,499	1,224,996,193	49,884,847	4·07	56,317,253	4·60	15,747,014	1·28	35,798,021	2·92	5·84	6·53	7·29	8·05
Producers of Silver-Bearing Copper Ores.		Copper.	Net cost of	copper.										
United States :—														
United Verde Copper Co.	3,980,153	196,084,395	19,379,700	9·88	3,082,304	1·57	2,241,154	1·14	6,750,000	3·44	10·48	10·84	11·04	11·24
Phelps Dodge Corporation	3,579,857	332,173,156	43,338,136	12·90	2,616,854	0·79	3,323,565	0·34	2,351,848	0·71	13·20	13·31	13·47	13·63
Utah Copper Co.	1,283,527	409,735,632	37,552,507	9·17	914,563	0·22	2,989,117	0·73	18,658,117	4·55	9·25	9·28	9·31	9·34
Kennecott (Alaska only)	752,788	93,841,251	9,323,168	9·93	523,467	0·56	—	—	4,000,612	4·26	10·11	10·19	10·33	10·47
Calumet and Arizona	1,638,559	84,013,739	9,753,696	11·65	1,078,590	1·29	1,105,680	1·32	1,742,703	2·07	12·05	12·25	12·55	12·85
†Anaconda Consolidated Copper	16,663,641	439,042,000	35,964,032	8·22	10,969,452	2·50	N.A.	N.A.	24,021,889	5·60	9·18	9·56	9·96	10·36
Total	27,898,525	1,554,890,173	155,311,239	9·99	19,185,230	1·23	9,659,516	0·62	57,525,169	3·70	10·46	10·64	10·88	11·12
Canada and Mexico :—														
Howe Sound...	4,674,105	48,876,000	4,682,275	9·60	3,066,418	6·27	—	—	1,985,687	4·06	8·68	13·00	13·96	14·92
South America :—														
Corrode Pasco	28,100,000	164,194,000	9,250,030	5·63	18,498,341	11·27	648,128	—	13,422,295	8·18	9·96	11·77	13·48	15·19
Total	32,774,105	213,070,000	13,932,305	6·54	21,564,759	10·12	648,128	0·34	15,407,982	7·23	10·43	12·05	13·59	15·13
Grand total	60,672,572	1,767,960,173	169,243,544	9·57	40,749,989	2·31	10,307,644	0·58	72,933,151	4·13	10·46	10·85	11·19	11·53

* The production figures for the United States Smelting Company include that of the Chief Consolidated Mining Company and possibly some others as well as that from the Company's own mines in the United States and Mexico.

† The figures for the Anaconda Consolidated Copper Company cover the production of copper from the Company's own mines in Montana. Cost figures are before bond interest less income from investments, and before depletion. Beside the silver credit, they are after credits for zinc and lead production, custom smelting, wire drawing, copper and brass manufacturing, &c. No allocation of income to these various operations is made in the Annual Report.

TABLE III.

—	Production.			Remaining silver at 40 cents an oz.			Production at falling prices for the metal. At 30 cents an oz.			At 20 cents an oz.			At 10 cents an oz.		
	Silver ozs.	Per cent. of U.S.	Per cent. of World.	Total ozs.	Per cent. of U.S.	Per cent. of World.	Total ozs.	Per cent. of U.S.	Per cent. of World.	Total ozs.	Per cent. of U.S.	Per cent. of World.	Total ozs.	Per cent. of U.S.	Per cent. of World.
United States:—															
Dry and siliceous silver ores ...	16,237,407	12·5	3·4	10,713,301	8·2	2·2	—	—	—	—	—	—	—	—	—
Silver-lead ores	30,871,197	23·7	6·4	24,308,988	18·7	5·1	22,267,870	17·1	4·6	22,267,870	17·1	4·6	11,880,463	9·1	2·5
Silver-copper ores	27,898,525	21·5	5·8	27,898,525	21·5	5·8	27,898,525	21·5	5·8	27,898,525	21·5	5·8	27,898,525	21·5	5·8
Total	75,008,129	57·7	15·6	62,920,814	48·4	13·1	50,166,396	38·6	10·4	50,166,396	38·6	10·4	39,778,988	30·6	8·3
Canada, Mexico, Central and South Americas:—															
Dry and siliceous silver ores ...	31,803,772	—	6·6	25,748,785	—	5·4	9,714,552	—	2·0	—	—	—	—	—	—
Silver-lead ores	53,927,302	—	11·3	7,034,758	—	1·5	7,034,758	—	1·5	7,034,758	—	1·5	7,034,758	—	1·5
Silver-copper ores	32,774,105	—	6·8	32,774,105	—	6·8	32,774,105	—	6·8	32,774,105	—	6·8	—	—	—
Grand total ...	193,512,308	—	40·3	65,556,648	—	13·7	49,528,417	—	10·3	39,808,863	—	8·3	7,034,758	—	1·5
Dry and siliceous ores	48,001,179	—	10·0	36,462,086	—	7·6	9,714,554	—	2·0	—	—	—	—	—	—
Silver-lead ores	84,798,499	—	17·7	31,343,746	—	6·5	29,302,638	—	6·1	29,302,638	—	6·1	18,915,251	—	3·9
Silver-copper ores	60,672,630	—	12·6	60,673,630	—	12·6	60,673,630	—	12·6	60,673,630	—	12·6	27,898,525	—	5·8
Grand total ...	193,512,308	—	40·3	128,479,462	—	26·7	99,690,822	—	20·7	89,976,268	—	18·8	—	—	9·7
Per cent. reduction ...	—	—	—	—	—	33·7	—	—	53·6	—	—	53·6	—	—	76·8

TABLE IV.

Estimated World Production of Silver at Falling Prices.

Kind of Ore.	At 65 cents an oz.		At 40 cents an oz.		At 30 cents an oz.		At 20 cents an oz.		At 10 cents an oz.	
	Total ozs.	Per cent.	Total ozs.	Per cent.	Total ozs.	Per cent.	Total ozs.	Per cent.	Total ozs.	Per cent.
Dry and siliceous	103,200,000	43·0	78,240,000	32·6	2,160,000	0·9	—	—	—	—
Silver-lead	84,000,000	35·0	30,720,000	12·8	28,560,000	11·9	28,560,000	11·9	18,480,000	7·7
Silver-copper	48,000,000	20·0	48,000,000	20·0	48,000,000	20·0	48,000,000	20·0	12,480,000	5·2
Silver-zinc	4,800,000	2·0	4,800,000	2·0	4,800,000	2·0	4,800,000	2·0	4,800,000	2·0
Total	240,000,000	100·0	161,760,000	67·4	83,520,000	34·8	81,360,000	33·9	35,760,000	14·9

NOTE.—Based on following assumptions:—(1) That prices for lead and copper will remain constant at present level, 8 cents and 14 cents per lb. respectively.
(2) That world production is obtained from the different ores in the same proportion as that of U.S.
(3) That average world costs are similar to those of the representative group studied.

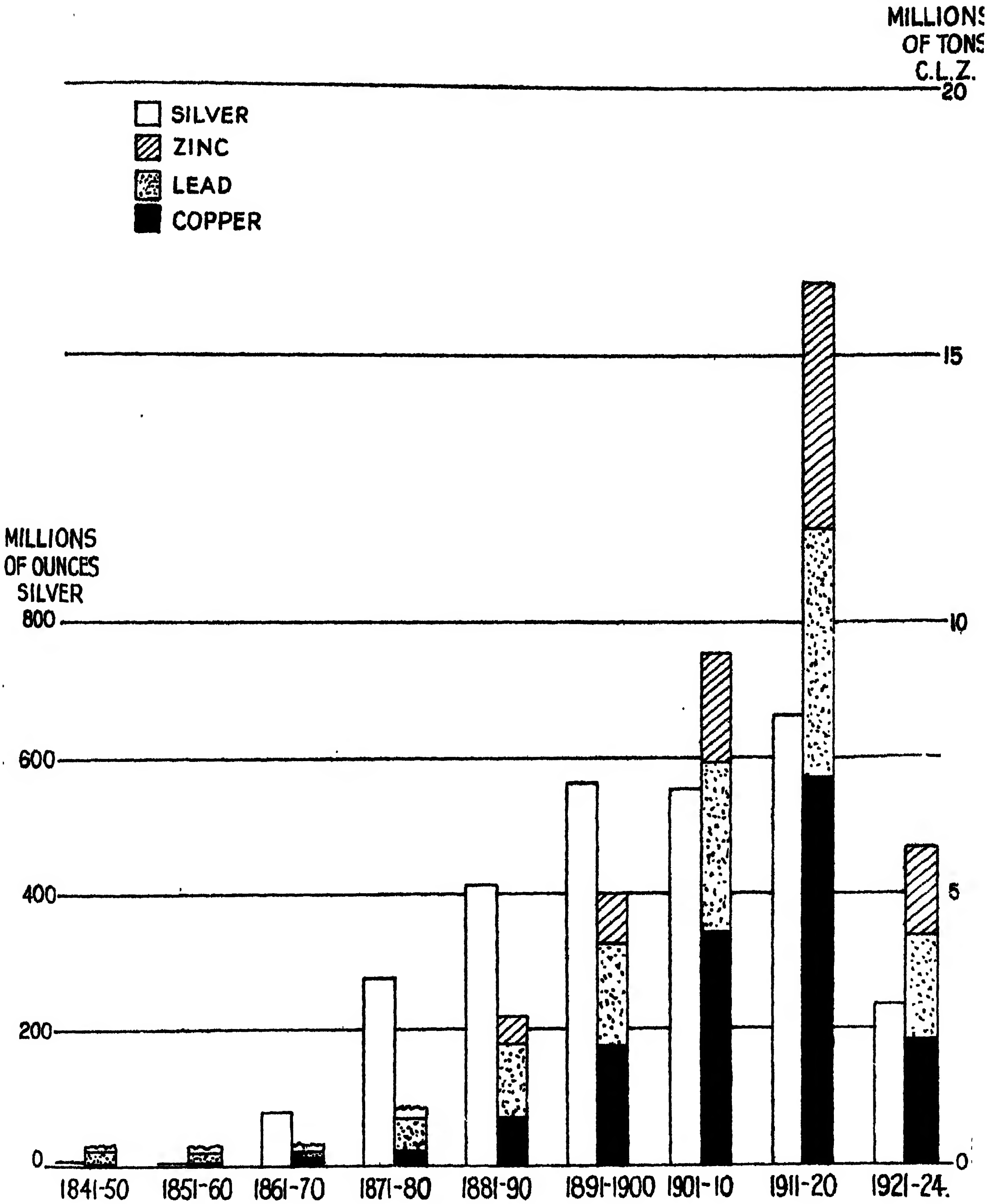

CHART I. *U.S. Production of Silver & the Base Metals* 1841-1924.

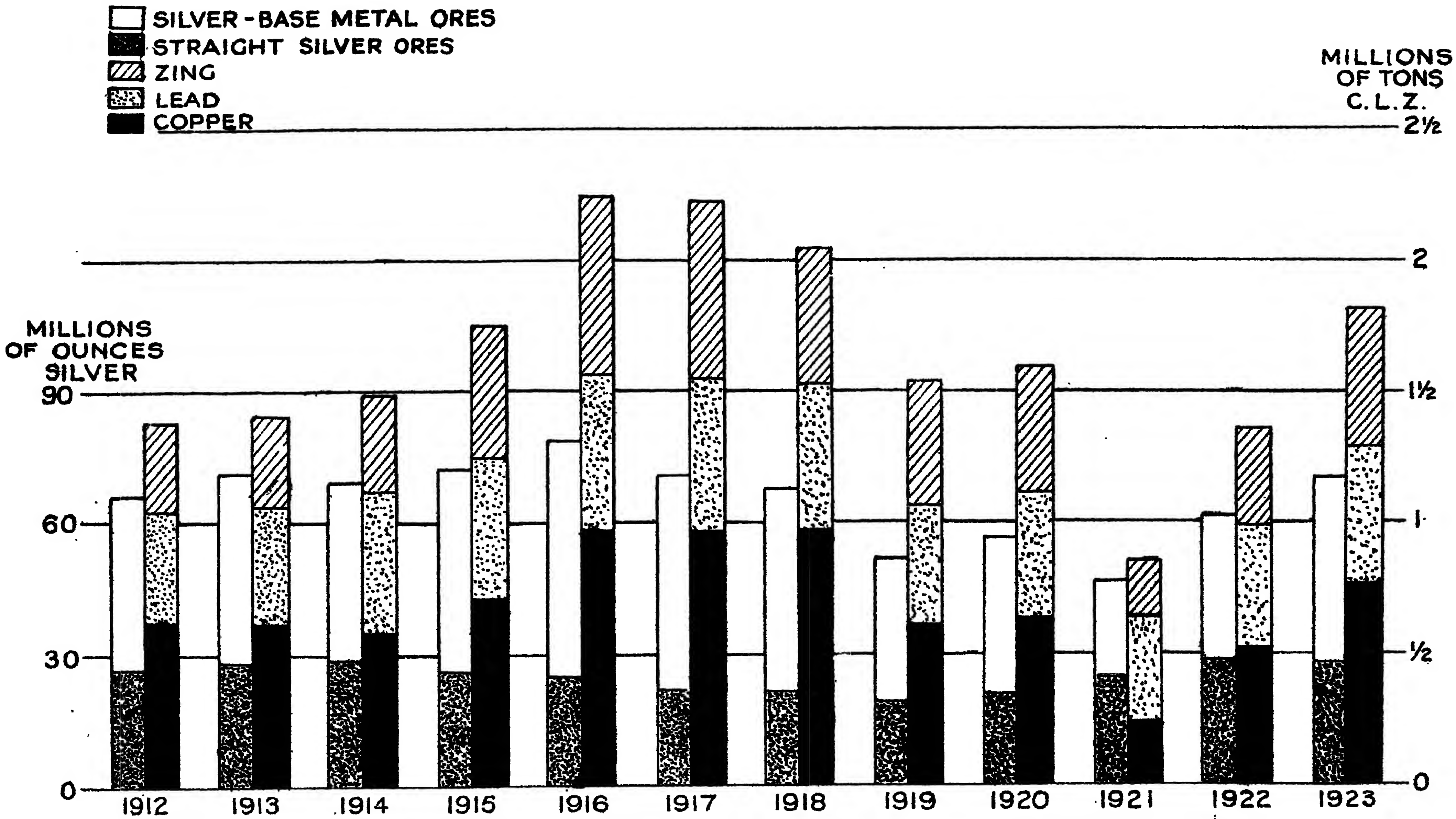

CHART 2. *U.S. Production of Silver by Sources compared with Production of Base Metals - Copper - Lead & Zinc. 1912 - 1923.*

Supplementary Memorandum by Mr. Notman.

The following figures are taken from the 1925 "Mining Manual and Year Book" by W. E. Skinner, published in London. They cover the production and financial returns for the fiscal year ending 30th June 1924 of the Burma Corporation, Ltd., operating very large lead mines in the Northern Shan States, upper Burma, and the Broken Hill South, Ltd., operating large silver, lead, and zinc mines at Broken Hill Barrier Ranges, New South Wales. Both these companies, so far as I am aware, are financed wholly by British capital and constitute major industrial units in their respective localities.

In preparing the following table I have assumed that the metals were marketed at the average of the London quotations for the period as reported by the American Bureau of Metal Statistics. In converting to dollars I have used the average exchange as reported by the Federal Reserve Bank for the period.

TABLE V.

Company.	Production. Silver. Ozs.	Production. Lead. Lb.	Net cost of lead. Total. $	Net cost of lead. Per lb. Cts.	Silver credit. Total. $	Silver credit. Per lb. Cts.	Net income before bond interest and depletion. Total. $	Net income before bond interest and depletion. Per lb. Cts.
Burma Corporation	5,287,711	115,938,000	3,111,988	2·68	3,531,186	3·04	3,285,652	2·84
		Lead and zinc.	Net cost of base metals.					
Broken Hill South	1,236,572	129,272,640	7,696,822	4·64	825,794	0·64	1,689,533	1·31

NOTE.—(1) Average metal prices: Lead £28,065, zinc £32,779 per long ton, and silver at 66·781 cents per oz.. Exchange taken at $4·4043.

(2) In the transcript of the accounts of the Broken Hill South, apparently no charge for depreciation had been made against current earnings. It was stated, however, that £80,000 of the operating income had been appropriated for construction, and I have assumed that this amount would represent a fair charge to depreciation in arriving at net income before debenture interest and depletion.

It will be noted that the net costs for lead and zinc, after silver credits, are well within the range of those in the representative group shown in Table II of my Report. In the case of the Burma Corporation, which produced over 90 per cent. of the Indian silver output for 1924, the silver credit amounted to 107 per cent. of the net income, while in that of the Broken Hill South it represented 49 per cent. A reduction in the selling price of silver to 10 cents per oz. would have reduced the income of the Burma Corporation over $3,000,000, leaving them less than $300,000 net income, while that of the Broken Hill South, Ltd., would have suffered a reduction of $602,147.

APPENDIX 88.

Memorandum on the Effect upon the Copper, Lead and Zinc Mining Industries of successive decreases in the Price of Silver which would be caused by the introduction of the Gold Standard in India, by Mr. H. A. C. Jenison,* Consulting Engineer, Guaranty Company of New York.

Introduction.

Practically all of the data contained in this Report were collected by the United States Senate Commission of Gold and Silver Inquiry, under the chairmanship of Senator Tasker L. Oddie (Nevada), in compliance with instructions from the United States Senate, to determine the reasons for the decrease in gold and silver production, and to recommend remedial legislation should it be necessary. Since most of the American silver production and a large part of the American gold production is derived from copper, lead and zinc ores, the investigation necessarily included the copper, lead and zinc industries.

The writer was the engineer in charge of the mining investigation, and prepared the questionnaire on mining costs and investment in the non-ferrous metal mining industry.

* 1919–23, Geologist in charge of copper, United States Geological Survey. 1923–5, Mining Engineer in charge of mining cost, investments, yield investigation of copper, lead, zinc, gold and silver, U.S. Senate Commission of Gold and Silver Inquiry.

The data collected covered the period 1913–24 inclusive, and are exceedingly comprehensive and complete for all of the principal mining companies, and represent approximately 95 per cent. of the productive capacity of the copper industry, 75 per cent. of the lead, 70 per cent. of the zinc, 75 per cent. of the silver, and 55 per cent. of the productive capacity of the gold mining industry.

A very careful and accurate analysis of the records of the companies was made for the sole purpose of determining the facts, and, if possible, recommending sound permanent solutions of problems of the industry.

All of the data were collected under the pledge of regarding the individual companies' records as highly confidential. Consequently in this Report only aggregate figures can be shown. The data are the most accurate that could possibly be assembled.

Companies included in the Report.

Copper Companies.

All of the American copper companies whose income from silver is a substantial part of the total income, and necessary to the successful exploitation of silver-bearing copper ores, have been included. If it were possible to include an analysis of the cost and production records of all the small copper vein mines of the Western States, the vital importance of silver in the successful operation of this group of copper mines would be more strikingly demonstrated.

The productive capacity of the group included in this Report is about 40 per cent. of the total domestic productive capacity, and the production of the group for the years 1919–24 inclusive was approximately 40 per cent. of the total domestic production and 20 per cent. of the production of the world. The production of this group is three to six times as large as any additional production which would be made from the rest of the industry without greatly expanding their present plants and equipment.

Therefore, any vital change in the conditions under which this group of mines is operating would be transmitted to the rest of the industry in the same or greater proportions.

Method of determining costs.

The costs herein shown include all the direct and indirect costs of mining, concentrating, smelting, refining and marketing, depreciation and taxes. The costs and income shown is that which has been actually derived from the production and marketing of metals.

Non-operating income, such as that from customs smelting, sale of power, rentals, &c., has been excluded, since in all cases the operations are too small and unimportant to be carried on independently of mining, and would therefore cease with the suspension of mining operations.

The costs and income have been carefully segregated according to metals for those companies which produce large quantities of two or more of the base metals. Where considerable quantities of more than one base metal are produced, and it is impossible to allocate the costs accurately, the secondary base metal has been expressed in terms of the principal metal, according to their respective values. Depletion (return of invested capital) has not been considered as a cost, and no consideration has been given to income from investments.

Lead companies.

A very large part of the western lead production of the United States is made by hundreds of small operators who sell their ore or concentrates to the customs smelters. The cost record of this production is not available, or it is too inaccurate to be of any value. Consequently, the cost statistics contained in the tables represent only five or six of the principal western lead mines. These statistics, however, are a sound basis for the consideration of the lead industry, since the production of lead from these mines varies far less with the fluctuations in the prices of lead and silver than does the production from the smaller mines. Consequently, it may be assumed that the great majority of the small western mines, whose aggregate production is so large and so important, are all more nearly marginal than those large mines whose costs are shown herein.

Method of determining costs.

The methods of arriving at costs, credits, and income for the lead companies are the same as for the copper companies and the data are in all ways comparable.

The Effect of a material decrease in the Price of Silver upon the Copper Industry.

The copper and silver producing group of mines under consideration in the United States represents about 40 per cent. of the total copper production capacity of the domestic industry. From 1919 to 1924 inclusive, this group produced about 40 per cent. of the total domestic production and about 20 per cent. of the world's production of copper.

Throughout that period the average production of silver from this group was in excess of 50 fine ozs. per ton of copper. The credit for silver per lb. of copper has decreased with the decrease in the price of silver from 3·12 cents in 1919 to 1·61 cents in 1924.

A practically proportionate decrease in the cost of producing copper (due to metallurgical improvements, selective mining, and production on the most economic scale) and in the selling price of copper has, however, resulted in a nearly constant relationship between the value of copper and of silver produced.

For the entire period under consideration, the value of the silver recovered from the mining of copper has varied from 85 per cent. to 112 per cent. and has averaged 102·5 per cent. of the total net income from mining and marketing copper. That is, the value of the silver recovered from the mining, recovery, and marketing of the metals contained in the silver-bearing copper ore has exceeded the total profit thereon.

Furthermore, in the year 1924. the cost of producing copper by this group was reduced to approximately the minimum which may be reasonably expected under the present and most economic scale of production, and yet the value of silver recovered from the copper ores produced was 97 per cent. of the net income from the operation.

Thus the price of silver determines the net profits from the production and marketing of copper from this group as a whole.

With the price of copper remaining constant, a decrease in the price of silver to about 33 cents per oz. would make it impossible for more than one or two of the companies in this group to operate at a real profit, and none of them could withstand a material operating or market reverse without incurring an operating loss. Furthermore, with silver at 33 cents per oz., and with no reverses of any kind, this group of companies would only earn about $5,000,000 upon an outstanding investment of more than $600,000,000, or about ·8 per cent. (eight-tenths of 1 per cent.).

Therefore, all of the companies in this group would be marginal producers and quite unable to earn an adequate return on capital invested, ever return the investment itself, or liquidate nearly $200,000,000 worth of outstanding bonds.

A further decrease in the price of silver would be proportionately more disastrous.

With such a decrease in the price of silver, there would be two alternatives for the mines of this group—(1) *intensive, selective mining*, and (2) *suspension of operations* until the price of copper again permitted operations.

The state of the copper market for the past seven years has forced upon this group of mines selective mining on a broad scale. Highly selective mining, however, did not yield a sufficient tonnage to greatly reduce the cost. In 1924, however, *increased tonnage*, combined with the maximum of selective mining possible, greatly lowered the cost of production.

Consequently it seems certain that sufficient selective mining could not be practised to compensate for the loss of the silver credit for any appreciable length of time. Even if sufficient selective mining could be practised to compensate for the loss of silver credit, it would curtail production enormously (thus creating a shortage of copper), quickly exhaust the high-grade ores without profit, and render the exploitation of the remaining great tonnages of low-grade ore impossible without an increase in price of copper greater than the loss of silver credit.

If operations were suspended instead of being enormously curtailed, a greater shortage of copper would result and the price of copper would inevitably increase enough to enable these mines to resume operations as marginal producers. The resumption of operations by this group would slightly depress the price of copper, again resulting in exhaustion of ore reserves, without profit, or would force suspension.

In either case, the price of copper throughout the world would increase at least 2 cents per lb., and these mines would remain marginal producers, thus failing to earn interest on the outstanding investment, much less repay it.

Furthermore, the increased price of copper of about 2 cents per lb., and the transformation of this group of mines into marginal producers through the decreased

value of silver would undoubtedly result in a rapid increase in productive capacity of the large, low-grade, non-silver-bearing, low cost, American, South American and African copper mines equal or nearly equal to the productive capacity of this group of mines. *In such an event, this group of mines would soon have to be abandoned.*

In summary, it is concluded that the decrease in the value of silver to 33 cents or less per oz. would ultimately probably result in—

(1) a loss or a failure to recover between $600,000,000 and $700,000,000 of outstanding investment in these mines;
(2) the loss of several thousands of millions of pounds of copper (5,000,000,000 to 10,000,000,000—worth at present prices $700,000,000 to $1,400,000,000) contained in the ore reserves which could not be mined.

Lead companies.

The most conspicuous development in the domestic non-ferrous metal mining industry since the war has been the extraordinary increase in the consumption and price of lead, particularly since 1919. This increase up to 1923 was in excess of 200,000 tons, or 31 per cent. and was partially supplied by an increase of about 125,000 tons in the domestic production, about 107,000 tons of which increase was supplied by increased or new production from the silver-lead mines of the west. The Central States, under the inducement of high prices of 1924, were only able to increase their production 49,000 tons, or 23 per cent. over the 1919 figure.

The accompanying tables indicate the increase of domestic production according to sources, and establish the fact that the marginal lead producers of the United States are the western silver-lead mines. It is apparent that, on account of the new high level in the price of lead, the increasing consumption, the tariff on imports, and the failure to develop (with the notable exception of one mine in British Columbia) any new large additional sources of lead, that, so far as the United States is concerned, these marginal silver-lead producers of the west do and will determine the domestic price of lead probably at some unknown point below that price where consumption of lead is restricted by the competition of substitutes.

It is impossible to determine accurately the cost of production of a very large part of the western lead because it is sold as ore or concentrates to the smelters and is derived from hundreds of small operators whose cost records are inadequate for the accurate determination of the cost of production. The accompanying table, showing the costs of lead in the principal western lead mines, is, however, sound criteria upon which to draw conclusions as to the effect on the production of lead of a large decrease in the price of silver, since their production is fairly constant and of low cost.

The five of the principal lead companies whose costs are shown for 1919, 1920 and 1922, are far more independent of fluctuations in the price of silver than the numerous small ones which sell their ore directly to the smelters. It is a matter of common knowledge and smelter experience that production, from those mines which sell their ore and concentrates to custom smelters, varies greatly with fluctuations in the price of lead and silver, and it is certain that most of such production was not and could not be made at decreased prices of lead and silver which did not and would not materially affect production from the five mines whose costs are shown.

For the years 1919 to 1922 inclusive the average cost of lead for the five mines considered was 8·23 cents per lb., the silver credit 4·32 cents per lb. of lead, and the net cost of lead was about 3·9 cents per lb. These averages include mines with relatively large silver production and mines with relatively small silver production, and may be taken as representative figures for the minimum average cost of production of lead in the Western States. It is a notable fact that, for the three years under consideration, the value of silver produced with the lead by these mines was 170 per cent. of the total net income from the operation.

Unquestionably there have been changes in the cost of production since 1922, but in general they have largely increased instead of decreased. The higher prices for lead in 1923 and 1924 enabled the large low cost mines (mainly the Idaho group) to increase their production by mining lower grade ores, thus increasing their average cost of production. The higher prices permitted the mines of the Utah and similar groups to increase their production by about 75 per cent. in 1923 and practically 100 per cent. in 1924.

In this connection it must be borne in mind that extensive selective mining is possible in the larger mines of this group, and their present production is readily divisible into two classes: (1) the low cost, half of the present production which was

possible under the fairly low lead prices of 1922; and (2) the high cost, half of the present production which is possible only under the present high prices for lead and very large credit for silver.

In 1924 the silver produced by the Utah group was below the average for the past seven years and yet was from 120 to 300 ozs. of silver per ton of lead. The silver credit varied for the different companies from 4 cents to 7 cents per lb., and averaged 5·3 cents per lb., which is twice as great as the difference in the price of lead in 1924 and 1922 (2·36 cents per lb.). Obviously with such large silver credit and the inability of this group to produce more than one-half of their present production with lead at 1922 prices (5·7 cents per lb.), most of their income, if not all of it, as a group, is still derived from the value of silver. In others, the average credit for silver per lb. of lead in 1924 for this group of mines was 5·3 cents per lb., and increase in 1924 prices for lead over 1922 was only about 2·36 cents. Therefore, a decrease in the price of silver to 35 cents or less per oz. (the price of lead remaining constant at 8 cents), the production of this group would be curtailed about 50 per cent. (the 1922 rate of production), or about 35,000 tons. Similar curtailment for the rest of the Western States would be inevitable and would total at least 70,000 tons, since the smaller Colorado, Nevada, Arizona, Idaho and Montana mines are equally, if not more, dependent upon silver.

Such curtailment of production would result in a shortage of lead and an increase in the price of lead sufficient to restore this production to the position of marginal production, or an increase equal to loss of silver credit, about 3 cents per lb. of lead.

Mexican mines, which supply the principal part of the imports of lead into the United States, are even more dependent upon silver for the successful operation, even at the present high price of lead, than are the most of western domestic mines. Representative Mexican mines indicate that the minimum silver recovery per ton of pig lead produced varies from 150 to 200 ozs. per ton of lead, indicating a minimum credit for silver per pound of lead of from 5 cents to 6·6 cents per lb.

This lead could not be produced and imported into the United States without an even greater increase in the price of lead than that necessary to permit of the western domestic mines to operate. The inability of this class of Mexican mines to operate without a credit for silver of 3 cents to 5 cents per lb. of lead would inevitably result in a still greater shortage of lead and a rise of price to such a level that even these marginal mines could supply the additional quantity of lead necessary to meet the demand.

An increase of about 3 cents per lb. would make lead about 11 cents per lb., a price which has been nearly equalled several times in the last two years. when the silver lead producers had normal credit for their silver. It is consequently believed that the subsequent decrease in price of lead was not due to the competition of substitutes, but due to increased production and satisfied demand.

Therefore, it is entirely reasonable to believe that a decrease in the price of silver to about 35 cents per oz. would result in an increased price of lead of at least 3 cents per lb., thus adding an additional cost of $45,000,000 per year to the present cost of lead to the consumers at the present rate of consumption.

Furthermore, such an increase in price of lead would greatly stimulate production from the non-silver-bearing domestic lead mines and the low cost foreign mines, such as the Sullivan mine in British Columbia. If these mines are able to produce an additional 70,000 to 150,000 tons of lead (the minimum sum of the domestic and Mexican production greatly affected by a decrease in the price of silver) the American and Mexican production, which would be marginal with a decrease to 35 per cent. per oz. of silver and increase of 3 cents per lb. of lead, would be permanently marginal without decreasing the price of lead and the mines could not be operated at a profit.

Zinc mines.

The zinc mines of the Western States, with the exception of three or four, are small, more or less intermittent producers of copper, lead, zinc, gold, and silver, and were more or less marginal under any conditions until the recent successful development of selective flotation.

During the period 1919–22 inclusive, three of the principal western zinc mines made an average production per year of about 113,000 tons of zinc at a cost of approximately 6 cents per lb. with an average credit for silver of about 2·09 cents

per lb., making a net cost of zinc slightly less than 4 cents per lb.. The credit for silver represented more than 100 per cent. of the net income from the operation.

The increased selling price of zinc has resulted in an increased cost for many of the small producers as well as some of the larger ones, on account of the treatment of lower grade ores, but the proportion which the value of silver has borne to the net operating income has remained nearly constant, thus contributing the principal part of the profit derived from this operation.

Most of these mines under the present conditions can operate for 10 to 20 years, whereas those mines in the Central States probably cannot maintain their present rate of production for more than five or six years without most unexpected discoveries of new zinc fields in the Central States. Very active development and prospecting in zinc regions of the Central States in the last few years has not resulted in the discovery of any new fields or in greatly extending the present ones. Therefore, for some years at least, such zinc mines as most of those of the Western States, will be marginal mines and consequently will largely determine the price of zinc. This determination of price is a function of the price of silver, and in the main, any loss due to a decrease in the price of silver must be compensated for by a corresponding increase in the price of zinc.

However, it is not believed that a decrease in the price of silver to 35 cents or less would result in an increase in the price of zinc of more than a cent or a cent and a half per lb., but this increase would be essential to those western mines, and it is essential that they continue to operate since they are the only mines on this continent with long assured lives, that is, with very large-developed and potential ore reserves.

Complex lead-zinc ores.

The failure of five years of more or less active prospecting to reveal any large new lead or zinc districts and the increasing demand for lead and zinc has concentrated attention more or less successfully on selective flotation and electro-thermic production of complex lead-zinc ores, which, together with the high price of lead and zinc and the large credit for silver, has made available millions of tons of complex lead-zinc ore. So far as can be determined at the present time, the increasing demand for lead and zinc must be satisfied largely, if not mostly, from such complex ores. In Utah, several years' experience with selective flotation of complex lead-zinc ores indicates that the average credit for silver is about $6 per ton of ore treated. This is understood from confidential sources to represent at least 80 per cent. of the profit to the miner of such complex lead-zinc ores. Obviously, a material decrease in the price of silver would make the treatment of most of such complex lead-zinc ores impossible without a corresponding increase in the price of lead and zinc.

Custom smelting and refining companies.

The principal profit derived from the custom smelters and refiners of lead in the United States is from the price margins on metals the recovery of more metal, particularly silver, than is paid. That is, the principal profit is derived, not from treatment charges, but from buying the lead and the silver in the ore or concentrates at the market price, recovering more metal than was paid for, and selling them (the metals) at a higher price than the purchase price. Since the credit of silver in customs ore varies from 2 cents to 25 cents or 30 cents per lb. of lead produced, a material decrease in the price of silver would make such custom operation impossible without a great increase in the price of lead. Losses which the customs smelters and refiners would sustain from a decrease in the price of silver would ultimately, of course, be transmitted to the miner, but the result would be the same in any case—a large increase in the price of lead. If the price of silver continuously decreased, it would be nearly impossible for the smelters to pay the miners for their silver without sustaining serious losses, since, under the present system, the miner is paid for his ore concentrates on the basis of the quotations of metals in New York as of the day on which the ore or concentrate arrives at the smelter, and the smelters would be forced to sell the silver at a future unknown but lower price. The loss due to such decline would have to be sustained by the smelter, or an entirely new system of settlement developed. In any case, the situation would be chaotic for some time.

Silver mines.

No effort has been made to show the costs of silver from the straight silver mines, since, on account of the varying conditions of the silver market for the past seven years, it is impossible to illustrate average conditions.

Until the expiration of the Pittman Act, costs per ton of ore were sacrificed in order to make a large production, and since that time highly selective mining has been extensively practised in order to effect the decreasing value of silver. Consequently, the costs records alone are insufficient data upon which to base an opinion.

It is certain, however, that even at the present price of silver, but few silver mines are making much profit, and it is even more certain with silver at 33 cents per oz. or less, that in a very few years (four or five at the most) the silver production from this group of mines would be nearly negligible.

SUMMARY.

Copper.

The decrease to 35 cents or less per oz. of silver would in all probability result in an increase in the price of copper of about 2 cents per lb., a loss of some $600 million invested in the copper-silver mines of the west, replacing of their production by foreign production, and the loss of 5 to 10 thousand million lbs. of metal contained in the ore reserves of these mines which could not be successfully operated under such conditions.

Lead mines.

The result of such a decrease in the price of silver so far as lead is concerned would in all probability be primarily and principally that of increasing the price of lead about 3 cents per lb. and making the silver-lead mines of the west marginal producers, thus rendering it impossible for them to earn interest on the investment or to recover the outstanding investment.

Zinc mines.

The decrease in the price of silver to about 35 cents per oz. or less would probably be reflected merely in an increase in the price of zinc of a cent or a cent and a half per lb., the loss of part of the zinc reserves of the west and the more rapid exhaustion of the comparatively short-lived reserves of the Central States.

Complex lead-zinc ores.

Until the increase in the price of lead and zinc offset the loss of the value of silver, the necessary production from the complex lead-zinc ores would be cut off and their general availability be postponed and increased in cost.

TABLE 1.

Mine Production of Silver in the United States and the number of Fine Ounces and Percentages of Production derived from the Principal Classes of Ores.*

1914—24 Calendar Years.

(In thousands of fine ounces.)

Year.	Total production.	Placers.		Dry and silicious ores.		Copper.		Lead.		Zinc.		Copper-lead, and copper-lead-zinc ores.		Lead-zinc ores.	
		Ozs.	% of total.	Ozs	% of total.	Ozs.	% of total.	Ozs.	% of total.	Ozs.	% of total.	Ozs.	% of total.	Ozs.	% of total.
1914	69,623	152	0·22	27,812	39·95	14,830	21·30	19,302	27·72	145	0·21	249	0·36	7,133	10·24
1915... ...	72,354	155	0·21	25,710	35·53	18,781	25·96	19,829	27·40	1,136	1·57	234	0·33	6,509	9·00
1916... ...	78,858	126	0·16	24,594	31·18	24,541	31·12	19,217	24·37	1,274	1·61	533	0·68	8,572	10·88
1917... ...	70,662	119	0·17	21,490	30·41	10,314	28·75	19,096	27·02	550	0·78	448	0·64	8,645	12·23
1918... ...	68,059	90	0·13	21,565	31·68	20,463	30·07	18,291	26·89	136	0·20	225	0·33	7,290	10·70
1919... ...	51,900	78	0·15	19,044	36·69	12,881	24·82	14,351	27·65	39	0·08	232	0·45	5,274	10·16
1920... ...	56,537	73	0·13	20,478	36·22	12,151	21·49	17,070	30·19	1,258	2·23	670	1·18	4,837	8·56
1921... ...	46,333	81	0·18	24,117	52·05	4,783	10·32	14,913	32·19	6	0·01	449	0·97	1,983	4·28
1922... ...	61,208	61	0·10	28,632	46·78	10,376	16·95	16,757	27·38	1,677	2·74	670	1·09	3,036	4·96
1923... ...	70,356	58	0·08	27,637	39·28	14,684	20·87	20,140	28·63	2,171	3·08	1,348	1·92	4,318	6·14
1924... ...	64,071	51	0·08	20,388	31·82	16,335	25·50	18,859	29·43	24	0·04	1,194	1·86	7,218	11·27
Average, 1914–24	64,542	95	0·15	23,770	36·83	15,467	23·96	17,984	27·86	765	1·19	568	0·88	5,892	9·13

* As reported by the U.S. Geological Survey—1925 figures are not yet available.

TABLE 2.

World's Production of Copper.

(In short tons—2,000 lb.)

—	1919.	1920.	1921.	1922.	1923.	1924.
North America:						
United States	604,642*	635,248*	236,006	493,853	738,762	793,377
Mexico	66,661	49,866	13,576	29,842	60,538	49,150
Canada	39,789	39,121	22,632	25,300	40,230	51,008
Cuba	10,991	7,491	8,600	11,788	11,963	12,742
Total North America ...	722,083	731,726	283,228	578,900	866,731	931,900
South America:						
Bolivia	7,714	10,910	10,674	10,154	11,744	8,200
Chile	87,721	109,075	65,299	142,830	201,042	209,855
Peru	43,243	36,356	36,689	40,133	48,684	38,495
Venezuela	700	—	800	1,075	1,175	1,230
Total South America ...	139,378	156,341	113,462	194,192	262,645	257,780
Europe:						
Austria-Hungary	713	1,747	4,600	5,050	5,327	4,465
France	962	1,718	2,395	3,199	9,031	5,511
Germany	17,384	19,015	20,944	18,739	18,739	21,495
Jugoslavia	1,332	2,684	4,376	5,756	7,536	8,978
Norway...	482	613	6,311	10,598	8,816	10,913
Russia	—	—	—	2,205	2,205	3,600
Spain and Portugal	38,581	25,353	36,596	40,234	57,115	60,713
Sweden...	4,442	1,793	1,465	67	5,180	3,086
Total Europe	63,896	52,923	76,687	85,848	113,949	118,761
Asia:						
Japan	86,468	74,727	59,626	59,663	70,316	69,378
Other Asia	1,098	593	1,280	1,162	810	1,378
Total Asia	87,566	75,320	60,906	60,825	71,126	70,756
Australasia	18,118	29,327	20,869	13,754	19,995	15,711
Africa	34,548	33,708	42,501	58,219	80,410	114,700
Other countries	4,409	3,307	3,307	3,307	3,307	4,409
Grand totals	1,069,998	1,082,652	600,960	995,045	1,418,163	1,514,017

* In the case of U.S., figures for 1919 and 1920 are based on blister copper, while figures for 1921, 1922, 1923, and 1924 are actual production by mines.

TABLE 3.—Copper Companies.

Recapitulation.

Year.	Production. Copper.		Production. Silver.	Income from metals. Copper.	Income from metals. Silver.	Income from metals. All metals.	Total operating expense, including depreciation and taxes.	Net operating income.	Cost of copper.	Silver credit of copper.	Net cost of copper.	Proportionate value of silver to net income.	Ozs. of silver per short ton of blister copper.
	1,000 lbs.	Short tons.	1,000 ozs.	$	$	$	$	$	Cts. per lb.	Cts. per lb.	Cts. per lb.	Per cent.	
1919 ...	434,544	217,272	12,994	76,419	13,552	99,237	80,665	12,113	18·564	3·119	15·445	111·9	59·8
1920 ...	487,550	243,775	12,817	87,219	13,479	103,424	87,461	15,593	17·939	2·765	15·174	86·4	52·6
1922 ...	488,750	244,375	12,268	66,294	11,818	80,575	68,996	10,275	14·107	2·418	11·689	115·0	50·2
1923 ...	607,220	303,610	16,153	89,262	12,990	102,252	90,226	12,026	14·859	2·139	12·720	108·0	53·2
1924 ...	592,018	296,009	14,280	77,187	9,538	86,725	76,836	9,889	12·979	1·611	11·368	96·5	48·2
All years ...	2,610,082	1,305,041	68,512	396,381	61,377	472,213	404,184	59,896	15·485	2·352	13·133	102·5	52·5
1923 & 1924	1,199,238	599,619	30,433	166,449	22,528	189,277	167,062	21,915	13·93	1·88	12·05	102·8	—

Proportion of Income derived from Silver.

1922. Cost of copper.	1922. Silver credit of copper.	1922. Net cost of copper.	1922. Proportionate value of silver to net income.	1923. Cost of copper.	1923. Silver credit of copper.	1923. Net cost of copper.	1923. Proportionate value of silver to net income.	1924. Cost of copper.	1924. Silver credit of copper.	1924. Net cost of copper.	1924. Proportionate value of silver to net income.
Cts. per lb.	Cts. per lb.	Cts. per lb.	Per cent.	Cts. per lb.	Cts. per lb.	Cts. per lb.	Per cent.	Cts. per lb.	Cts. per lb.	Cts. per lb.	Per cent.
12·740	1·628	11·112	75·3	16·293	1·774	14·519	980·0	14·071	1·129	12·942	697·9
16·453	2·873	13·580	136·8	13·758	1·598	12·160	62·9	12·916	1·297	11·619	78·6
7·566	·738	6·828	11·1	13·125	·572	12·553	26·7	13·327	·469	12·858	108·2
9·482	·632	8·850	13·3	14·932	1·072	13·860	127·6	13·046	·826	12·220	77·9
14·694	·642	14·052	—	16·257	3·397	12·860	184·6	12·879	2·339	10·540	101·3
23·155	2·666	20·489	—	16·968	3·469	13·499	287·5	14·387	2·877	11·510	190·9
17·991	4·745	13·246	591·5	18·062	3·057	15·005	—	18·207	2·843	15·364	—
12·439	1·500	9·84	55·4	13·979	1·052	12·927	59·4	13·691	·870	12·821	430·8
10·139	·679	9·460	10·9	11·281	1·781	9·500	34·3	12·068	1·248	10·820	57·3
13·232	1·280	11·952	116·0	18·486	3·486	15·000	—				
15·704	4·391	11·313	810·4								
14·107	2·418	11·689	115·0	14·859	2·139	12·720	108·0	12·979	1·611	11·368	96·5
							Average, 1923–24	13·93	1·88	12·05	102·8

TABLE 4.—Copper Companies.

—	Silver at 50 cents an oz.					Silver at 33⅓ cents an oz.					Silver at 10 cents an oz.				
	Silver income.	Decrease in net income	Net income	Copper credit.	Net cost of copper.	Silver income	Decrease in net income	Net income.	Copper credit.	Net cost of copper.	Silver income.	Decrease in net income	Net income	Copper credit.	Net cost of copper.
	$'000	$'000	$'000	Cts.	Cts.	$'000	$'000	$'000	Cts.	Cts.	$'000	$'000	$'000	Cts.	Cts.
1923	575	170	94*	1·37	14·92	383	362	286*	·91	15·38	115	630	554*	·27	16·02
	413	264	812	·97	12·79	275	402	674	·65	13·11	83	594	482	·20	13·56
	94	59	515	·35	12·78	62	91	483	·23	12·90	19	132	442	·07	13·06
	1,017	591	669	·68	14·25	678	930	330	·45	14·48	203	1,405	145*	·14	14·79
	4,159	2,662	1,033	2·07	14·19	2,773	4,048	353*	1·38	14·88	832	5,989	2,294*	·41	15·85
	140	90	10*	2·11	14·86	93	137	57*	·68	16·31	28	202	122	·42	16·55
	255	163	205*	1·86	17·20	170	247	289*	1·27	16·79	51	367	409*	·27	17·79
	93	59	197	·64	13·34	62	90	166	·43	13·55	19	133	123	·13	13·85
	1,063	680	4,409	1·09	10·19	708	1,035	4,054	·72	10·56	213	1,530	3,559	·22	11·06
	270	173	211*	2·12	16·37	180	263	301*	1·42	17·07	54	389	427*	·32	18·17
Total ...	8,077	4,913	7,113	1·33	13·53	5,384	7,606	4,420	·89	13·97	1,615	11,371	655	·27	14·59
1924	250	85	37*	·84	13·23	167	168	120*	·56	13·51	50	285	237*	·17	13·90
	407	137	555	·97	11·95	271	273	419	·65	12·27	81	463	229	·19	12·73
	89	30	80	·35	12·98	59	60	50	·23	13·10	18	101	9	·07	13·26
	773	259	1,066	·57	12·48	515	517	808	·38	12·67	155	877	448	·12	12·93
	4,173	1,400	4,104	1·75	11·13	2,782	2,791	2,713	1·17	11·71	835	4,738	766	·35	12 53
	298	99	109	2·16	12·23	198	199	9	1·44	12·95	60	337	129*	·43	13·96
	152	51	211*	2·13	16·08	101	102	262*	1·41	16·80	30	173	333	·42	17 79
	84	28	2*	·65	13·04	56	56	30*	·44	13·25	17	95	69*	·13	13·56
	916	307	1,829	·94	11·13	610	613	1,523	·62	11·45	183	1,040	1,096	·19	11·88
Total ...	7,140	2,398	7,491	1·21	11·77	4,760	4,778	5,111	·80	12·18	1,428	8,110	1,779	·24	12 74
All years (1919, 20, 22, 23 & 24).	34,526	24,865	30,711	1·31	13·84	22,837	36,554	19,022	·87	14·28	6,851	52,540	3,036	·26	14·89
1923 & 1924 ...	15,217	7,311	14,604	1·27	12·66	10,144	12,384	9,531	·85	13·09	3,043	19,485	2,430	·25	13 68

* Indicates a *loss*.

TABLE 5.—Copper Mines. Copper at 14 cents an oz.

Year.	Actual.				Silver at 50 cents an oz.			Silver at 33⅓ cents an oz.			Silver at 10 cents an oz.		
	Average cost of copper.	Average silver credit.	Average net cost of copper.	Average production.	Average silver credit.	Average net cost.	Total theoretical production.	Average silver credit.	Average net cost.	Total theoretical production.	Average silver credit.	Average net cost.	Total theoretical production.
	Cts.	Cts.	Cts.	1,000 lbs.	Cts.	Cts.	1,000 lbs.	Cts.	Cts.	1,000 lbs.	Cts.	Cts.	1,000 lbs.
1923	15·18	1·45	13·73		1·11	14·07*	Copper	·74	14·44*	Copper	·22	14·96*	Copper
and	13·34	1·45	11·89		·97	12·37	385,000.	·65	12·69	165,000.	·20	13·14*	100,000.
1924.	13·23	·52	12·71		·35	12·88	Silver	·23	13·00	Silver	·07	13·16*	Silver
	13·99	·95	13·04	Copper	·63	13·36*	ozs.	·44	13·55*	ozs.	·13	13·86*	ozs.
	14·57	2·87	11·70	600,000.	1·91	12·66	11,312.	1·28	13·29*	2,980.	·38	14·19*	1,978.
	15·68	3·18	12·50	Silver	2·14	13·50*	Per cent.	1·40	14·23*	Per cent.	·43	15·25*	Per cent.
	18·14	2·95	15·19	ozs.	2·00	16·14*	decline.	1·34	16·80*	decline.	·35	17·79*	decline.
	13·84	·96	12·88	15,217.	·65	13·19*	Copper	·44	13·40*	Copper	·13	17·71*	Copper
	11·16	1·52	10·64		1·02	10·14	36.	·67	10·49	72.	·21	10·95	84.
	18·49	1·75	16·74		1·53	17·43*	Silver 26.	1·02	16·41*	Silver 80.	·32	18·17*	Silver 87.

* Too high cost for profitable operation with copper at 14 cents per lb. (Margin between sales price and cost necessary for such operation assumed to be at least 1 cent per lb.)

TABLE 6.—Smelter Production of Lead from Domestic Ore.

All mines in this group are producers of silver-lead ore.

—	1919.	1920.	1921.	1922.	1923.	1924.	Per cent. increase, 1923 over 1919.	Per cent. increase, 1924 over 1919.
WESTERN STATES.								
Alaska	645	591	773	324	400	582	−38·0	−9·8
Arizona	5,407	5,987	3,313	7,218	8,828	9,372	+63·3	+73·3
California	2,004	2,260	614	3,018	5,168	2,305	+157·9	+15·0
Colorado	18,867	17,752	12,104	11,108	23,885	25,491	+26·6	+35·1
Idaho	89,091	117,191	99,707	91,487	127,797	123,709	+43·4	+38·9
Montana	17,513	13,231	11,565	14,551	18,345	21,226	+4·8	+21·2
Nevada	5,958	8,650	3,553	4,264	8,044	8,070	+35·0	+35·4
New Mexico... ...	1,418	1,123	384	1,230	1,638	2,263	+15·5	+59·6
Texas	8	1	1	5	40	27	+500·0	+338·0
Utah	65,102	64,006	51,872	63,130	104,678	119,318	+60·8	+83·2
Washington	1,090	2,460	325	478	2,008	2,057	+84·2	+88·7
Total... ...	207,103	233,252	184,211	196,813	300,831	314,420	+45·3	+51·8
EASTERN STATES.								
Illinois	977	948	271	750	1,286	1,089	+31·6	+11·4
Kansas	7,951	8,421	10.939	10,900	20,207	12,895	+154·1	+62·2
Kentucky	83	114	41	73	66	201	−20·5	+142·2
Missouri	150,341	171,999	151,028	202,245	169,323	191,501	+12·6	+27·4
Oklahoma	49,984	68,494	46,902	67,436	59,602	56,017	+19·2	+12·1
Tennesse	2,371	2,705	—	751	1,020	985	−57·0	−58·5
Wisconsin	3,975	3,841	1,079	1,323	601	1,973	−84·9	−50·4
Total... ...	215,682	256,522	210,260	283,478	252,105	264,661	+16·9	+22·7
Grand Total...	422,785	489,777	394,471	480,291	552,936	579,081	+30·8	+37·0

TABLE 7.

Production of Lead and Silver from principal Western Lead-Silver Mines.

Company.	1919. Lead production.	1919. Silver production.	1920. Lead.	1920. Silver.	1921. Lead.	1921. Silver.	1922. Lead.	1922. Silver.	1923. Lead.	1923. Silver.	1924. Lead.	1924. Silver.	Total Lead.	Total Silver.	Ratio Silver to Lead.	Lead per cent. increase, 1923/1919.	Lead per cent. increase, 1924/1919.
1... ...	3,423	583,542	4,255	906,016	3,975	1,124,584	4,949	1,037,240	5,503	1,084,977	3,905	956,141	26,010	5,692,500	218·9	160·8	114·1
2... ...	2,990	2,757,533	6,359	2,622,132	6,248	3,262,241	9,890	4,437,033	13,249	4,025,792	10,916	2,336,417	19,652	19,641,148	395·6	343·1	265·1
3... ...	12,126	817,161	20,811	1,161,614	27,409	1,723,702	28,157	1,457,299	33,682	1,581,334	37,709	1,679,394	159,894	8,420,504	52·7	177·8	211·0
4... ...	12,363	795,058	16,859	923,453	19,568	1,055,572	21,245	1,170,458	12,888	762,905	19,882	1,093,861	102,805	5,801,307	56·4	4·2	60·8
5... ...	—	—	—	—	—	—	5,685	1,090,418	10,404	1,445,299	11,743	1,132,351	27,832	3,668,068	131·8	—	—
6... ...	5,431	528,328	5,302	629,929	3,132	470,144	8,251	1,068,753	13,561	1,757,135	17,392	2,551,104	53,069	7,005,393	132·0	149·7	220·2
7... ...	3,080	1,829,170	6,758	2,194,373	5,709	2,584,977	8,093	2,177,029	20,295	3,614 294	26,732	4,025,463	70,667	16,425,306	252·4	558·9	767·9
8... ...	32,798	1,107,213	35,536	1,194,478	37,189	1,247,647	34,713	1,154,843	34,879	1,177,631	36,475	2,173,007	211.590	8,054,819	38·1	6·3	11·2
Totals.	72,211	8,418,005	95,880	9,631,995	103,230	11,468,867	120,983	13,593,073	144,461	15,449,367	164,754	16,147,738	701,519	74,709,045	106·49	100·1	128·2

Production of Lead and Silver from principal Lead-Silver Mines in Utah.

Company.	1919. Lead production.	1919. Silver production.	1920. Lead.	1920. Silver.	1921. Lead.	1921. Silver.	1922. Lead.	1922. Silver.	1923. Lead.	1923. Silver.	1924. Lead.	1924. Silver.	Total Lead.	Total Silver.	Ratio Silver to Lead.	Lead per cent. increase, 1923/1919.	Lead per cent. increase, 1924/1919.
1... ...	3,423	583,542	4,255	906,016	3,975	1,124,584	4,949	1,037,240	5,503	1,084,977	3,905	956,141	26,010	5,692,500	218·9	60·8	14·1
2... ...	2,990	2,757,533	6,359	2,622,132	6,248	3,262,241	9,890	4,437,033	13,249	4,025,792	10,916	2,536,417	49,652	19,641,118	395·6	343·1	265·1
5... ...	—	—	—	—	—	—	5,685	1,090,418	10,404	1,445,299	11,743	1,132,351	27,832	3,668,068	131·8	—	—
6... ...	5,431	528,328	5,302	629,929	3,132	470,144	8,251	1,068,753	13,561	1,757,135	17,392	2,551,104	53,069	7,005,393	132·0	149·7	220·2
7... ...	3,080	1,829,170	6,758	2,194,373	5,709	2,584,977	8,093	2,177,029	20,295	3,614,294	26,732	4,025,463	70,667	16,425,306	252.4	558·9	767·9
Totals.	14,924	5,698,573	22,674	6,352,450	19,064	7,441,946	36,868	9,810,473	63,012	11,927,497	70,688	12,201,476	227,230	52,432,415	230·7	322 2	473·7

TABLE 8.

Lead Companies.

—	Lead.		Silver.	Income from metals.			Operating expense, including depreciation and taxes.	Net operating income.	Cost per lb. of lead.	Silver credit per lb. of lead.	Net cost per lb. of lead.	Ozs. silver per short ton of lead.	Proportionate value of silver to net income.
				Lead.	Silver.	Total income.							
	1,000 lbs.	Short tons.	1,000 ozs.	$'000	$'000	$'000	$'000	$'000	Cents.	Cents.	Cents.		
1919									7·725	5·448	2·277	98·1	1,046·4
									30·237	25·545	4·692	459·7	728·4
									5·515	1·895	3·620	33·8	84·0
									32·370	33·734	1·364	593·8	354·0
									10·115	3·575	6·540	64·3	Loss
	109,299	54,650	4,744	6,021	5,329	11,590	9,579	2,011	8·764	4·876	3·888	86·8	265·0
1920									6·686	5·894	·792	118·8	209·7
									21·637	11·111	10·526	224·7	563·0
									6·844	1·818	5·026	33·6	63·0
									20·132	17·416	2·716	324·7	261·6
									8·055	2·752	5·303	54·8	112·5
	133,013	66,507	5,403	9,851	5,655	16,053	11,898	4,155	8·945	4·251	4·694	81·2	136·1
1922									4·554	4·945	·391	129·8	117·0
									13·406	11·913	1·493	239·9	170·3
									5·743	1·654	4·089	44·8	97·0
									15·625	13·376	2·249	269·0	343·7
									6·406	2·749	3·657	55·4	126·1
	150,181	75,091	6,671	8,372	5,988	14,659	10,771	3,838	7·172	3·987	3·185	88·8	156·0
Grand total ...	392,493	196,248	16,818	24,244	16,972	42,302	32,248	10,004	8·216	4·324	3·892	85·7	169·7

Typical Mexican Mines.

—	Lead.	Copper.	Copper expressed in terms of lead.	Total production in terms of lead.	Silver.	Income from metals.			Total income.	Operating expense.	Net operating income.	Cost per lb. of lead.	Silver credit per lb. of lead.	Net cost per lb of lead.	Ozs. silver per short ton of lead.	Per cent. value of silver to net income.
						Lead.	Copper.	Silver.								
	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 ozs.	$'000	$'000	$'000	$'000	$'000	$'000	Cents.	Cents.	Cents.		
1919 ...												5·23	4·68	·55	154	202
1920 ...												7·99	4·08	3·91	158	Loss
1922 ...												6·01	4·58	1·43	186	357
	138,726	31,996	86,903	225,629	19,160	4,236	2,685	10,041	16,963	14,499	2,464	6·43	4·45	1·98	170	408

TABLE 9.

Zinc Companies.

Year.	Zinc.	Silver.	Income from metals. Zinc.	Income from metals. Silver.	Income from metals. All metals.	Total operating expense, including depreciation and taxes.	Net operating income.	Cost per pound of zinc.	Silver credit per pound of zinc.	Net cost per pound of zinc.	Proportionate value of silver to net income.
	1000 lbs.	1000 ozs.	$'000	$'000	$'000	$'000	$'000	Cts.	Cts.	Cts.	
1919 ...								8·646	1·478	7·168	—
								4·416	1·135	3·281	140
								8·10	5·33	2·77	135
	204,950	5,096	9,691	4,509	14,870	12,667	4,403	6·18	2·20	3·98	102
1920 ...								9·504	1·821	7·683	—
								4·827	0·94	3·887	341
								6·59	2·37	4·22	63
	243,022	4,966	15,183	4,208	20,022	16,055	3,967	6·606	2·732	4·874	106
1922 ...								10·719	4·774	5·945	424
								3·339	0·724	2·615	634
								4·77	2·84	1·93	78
	231,276	6,392	10,505	5,444	15,939	11,830	4,628	5·115	1·176	3·939	118
1919, 1920, and 1922	679,248	16,454	35,379	14,161	50,831	40,552	12,998	5·970	2·085	3·885	109

TABLE 10.

Probable Production of the World made unprofitable by successive Decreases in the Price of Silver.

LEAD.

Price of silver.	Short tons.	Per cent. of world production.
50	97,000	6·7
$33\frac{1}{3}$	160,000	10·8
10	383,000	26·2

World's production 1924 = 1,457,000 tons.

COPPER.

Price of silver.	Short tons.	Per cent. of world production.
50	100,000 in U.S. No estimate made for foreign production.	6·7 from U.S. No estimate for foreign production.
$33\frac{1}{3}$	400,000	27
10	400,000	27

World's production 1924 = 1,500,000 tons.

TABLE 11.

Probable Percentage of Silver Production of the World made unprofitable by successive Decreases in the Price of Silver.

Price of silver, cts. per oz.	Dry and siliceous ores.	Copper-silver ores.	Lead-silver ores.	Total.
50	16	26	28	20
$33\frac{1}{3}$	80	80	36	58
10	100	87	75	79

Probable Silver Production in the World made unprofitable by successive Decreases in the Price of Silver.

Millions of Ozs. Fine.

Price of silver, cts. per oz.	Dry and siliceous ores.	Copper-silver ores.	Lead-silver ores.	Total.
50	15	13	19	47
$33\frac{1}{3}$	75	40	25	140
10	94	44	52	190

Total world's production - - - 240

Total silver accounted for - - - 220

APPENDIX 89.

Letter from Sir James Wilson, K.C.S.I., to the Secretary to the Royal Commission on Indian Currency and Finance, dated Annieslea, Crieff, Perthshire, the 8th September 1925.

I have the honour to submit, for the information of the Royal Commission, copies of (1) a paper on "Indian Currency and Exchange," which I read in February 1923 to the Economic Society of Edinburgh, and (2) an article on "Indian Currency Policy," which I am sending to the *Asiatic Review*, in the hope that the calculations I have made may be found useful.

Paper on "Indian Currency and Exchange," by Sir James Wilson, K.C.S.I., dated 31st January 1923.

It is with some diffidence that I venture to address this Society on such a complicated question as that of "Indian Currency and Exchange." I cannot claim to be a financial or a banking expert, and it is only as a humble student of economics that I approach this subject, which is of immense importance to the prosperity and welfare of the millions of India. It appears to me that the safest basis for the study of such a subject is to get hold and to keep hold of statistical facts, so as not to lose oneself in the clouds of theory, and I must ask you to bear with me while I put certain figures and calculations before you.

The Paper Pound Sterling.

In this country we are accustomed to see rates of exchange quoted in sterling. For nearly a century before the outbreak of war in 1914, a quotation in sterling meant a quotation in sovereigns or fractions of a sovereign, because all legal tender bank notes were freely convertible into sovereigns, which could be exported without restriction. The sovereign contains 113 grains of fine gold, while the United States gold dollar contains 23·22 grains; so that a sovereign exchanges for 4·87 gold dollars, and up till 1914 the rate of exchange between London and New York could not vary from this par rate by more than a small fraction above or below the cost of transporting gold from one country to the other, whatever the balance of trade might be. And as a matter of fact for many years up to that date the lowest point in the rate of exchange between London and New York was 4·77 dollars to the pound—a difference from par of a little over 2 per cent.

Immediately after the outbreak of war Parliament passed an Act authorising the issue of one pound Currency Notes and making them legal tender to the same value as a sovereign. The export of sovereigns from this country was at the same time forbidden, except under special permission from the Government. The effect of these provisions, which are still in force, was to make the Currency Note practically inconvertible into gold for the purpose of international exchange; and as a natural consequence the value of this practically inconvertible paper currency varied mainly according to (1) the relation between the demand for and supply of the notes, and (2) the ideas of financiers (including bankers, merchants and investors all the world over) as to the prospects of an increase or decrease in the note issue, and of the Currency Notes again becoming freely convertible into a sovereign. A credit in sterling therefore no longer meant a command over so many sovereigns, but only a command over so many currency notes; and the value of sterling in international exchange became subject to violent fluctuations. The best measure of those fluctuations is the rate of exchange with New York, because the United States have managed all through to keep their notes convertible; so that a credit in dollars has all through meant a command over so many gold dollars. Another measure of the value in gold of the British paper pound has been available since 1919, when the Government granted permission for the sale of South African gold bullion in London, with freedom to export. The two bases for an estimate of the value of the British paper pound in gold necessarily correspond closely day by day.

I append two statements, (1) giving the actual quotations on certain dates of prices and rates of exchange bearing on this subject, and (2) the corresponding values in grains of fine gold or of fine silver calculated on those quotations. All through the real basis of international exchange has been, and continues to be, gold; so that the common measure to which attention should be specially directed is the value of the different currencies in grains of fine gold. I take as one of my dates 31st

January 1920, because it was immediately after that date, namely, on 2nd February 1920, that the Secretary of State for India made his momentous announcement that he would aim at giving the rupee a fixed value in exchange of one rupee for 11·3 grains of fine gold—that is, one-tenth of the gold content of the sovereign. As the latest of my dates I have given the quotations for 31st January 1923, exactly three years after, and by way of comparison, to show the changes which have taken place during the last 12 months, I give the quotations for the corresponding date in 1922.

On 31st January 1920, the value of the British paper pound sterling, as shown both by the rate of exchange with New York and by the results of the sales of gold in London, with freedom to export, was at about its lowest, being then equivalent to 82 grains of fine gold—that is 72 per cent. of the 113 grains contained in a sovereign—in other words, it was worth only 14*s.* 5*d.* measured in gold. The British Government had, on the Report of the Cunliffe Committee, declared its intention to restore the free market in gold in London, which would necessarily lead to the restoration of the paper pound to the value of a sovereign, and had taken practical steps to make a gradual reduction in the quantity of paper currency outstanding, which again would necessarily tend to an improvement in the gold value of the paper currency unit. As a result of that policy, by 31st January 1922 the value of the paper pound had risen to 99·5 grains of fine gold, equivalent to 88·1 per cent. of the gold in a sovereign, and during the last 12 months there has been a further improvement, until on 31st January 1923 the price of gold in London gave the paper pound the value of 108·1 grains of fine gold, which is 95·7 per cent. of the 113 grains in a sovereign—an improvement of 8·6 per cent. in the last 12 months. We are now therefore within 5 per cent. of seeing the pound sterling valued in London, in New York, and therefore all the world over, as equivalent to a sovereign. One of the chief reasons for this marked improvement, which has a great effect in reducing the sterling prices of all articles imported from abroad and of all articles produced in this country which have to compete with them, has been the reduction in the quantity of Currency Notes outstanding. For instance, on 31st January 1922 the quantity of Currency Notes outstanding was £303 million and by the corresponding date this year it had been reduced to £279 million—a reduction of nearly 8 per cent. A further reason is the increase in the ratio of gold and bank notes held as a reserve against the currency notes to the total issue from 15·8 per cent. on 31st January 1922 to 17·3 per cent. on 31st January 1923. The chief reason, however, for the improvement is, no doubt, the growth of confidence throughout the world in the determination and ability of the British Government to restore at an early date the value of the legal tender currency note to that of a sovereign. In judging of the true meaning of the quotations during recent years, it is necessary to bear in mind the changes in the value of the sterling in which they are quoted, and the simplest plan is to reduce all such quoted prices to terms of grains of fine gold.

Indian Currency before the War.

For nearly a century the principal legal tender in India has been the silver rupee, weighing 180 grains and containing 165 grains of fine silver. Up to the year 1873 the world ratio between gold and silver remained in the neighbourhood of 15·5 ozs. of silver to 1 oz. of gold, and the quoted price of standard silver in London remained in the neighbourhood of the corresponding rate of 60·8*d.* per oz. British standard silver is 925 fine—that is to say, 1,000 ozs. of standard silver contain 925 ozs. of fine silver; so that this London price of standard silver meant a price of 65·7*d.* per fine oz. At that rate the value in gold of the 165 grains of silver contained in a rupee coin was in London 22·6*d.*, and the exchange value of the rupee, though it fluctuated slightly from year to year, remained in the neighbourhood of that figure—not far short of 2*s.* to the rupee; so that it became a general idea that the rupee was worth about one-tenth of a pound, which would make it worth 11·3 grains of gold.

About 1873 Germany's demonetisation of silver and action taken in America and other countries led to a sudden increase in the world's demand for gold and diminution in the world's demand for silver. This caused a rapid fall in the gold value of silver, until in 1902 an ounce of gold would buy 39 ozs. of silver instead of 15·5, and the price of standard silver in London fell to 24*d.* per oz., at which rate the value in London of 165 grains of silver was only 9*d.* instead of 22·6*d.* During the first part of this period, while the Indian Mints remained open, and the rupee was thus still linked with silver, the exchange value of the rupee necessarily fell with

the fall in the value of the 165 grains of silver contained in it, until in 1892 the rupee was worth only 15*d.* instead of the traditional rate of 24*d.* In 1893, however, the Indian Mints were closed to the free coinage of silver, and for some years practically no addition was made to the number of rupee coins in existence, while the demand for them increased with the growth of India's prosperity and trade; so that the value in exchange of the rupee coin was no longer determined by the value of the 165 grains of silver contained in it, but, after falling to 13*d.* in 1894, steadily increased until it was stabilised at 16*d.* per rupee, or Rs. 15 to the sovereign, at which rate it remained until after the outbreak of war, although the value of the silver contained in it went down to less than 9*d.* in 1909. The closing of the Mints had thus resulted in unlinking the rupee from silver, and the success of the action taken to stabilise the rate of exchange at 16*d.* meant that the rupee was now a token coin linked with gold at the rate of Rs. 15 to the sovereign, or 7·53 grains of gold to the rupee.

Effect of the War.

When war broke out, many Governments took steps to collect as much gold as possible, and prohibited or greatly restricted the export of gold. India has always been anxious to secure as much as possible of the precious metals, and during the four years ending with 31st March 1914 she absorbed 88 million sovereigns' worth of gold—nearly one-fourth of the world's production for those four years. The war and the action taken by various Governments, including her own, greatly restricted the import of gold into India, and during the five years of war conditions her absorption of gold was only 30 million sovereigns' worth, whereas, had war not broken out, she would probably have absorbed during those five years something like 100 million sovereigns' worth of gold. Being thus starved of gold, the people of India demanded a great increase in the import of silver, and ultimately forced the Government to import immense quantities of silver and coin it into rupees. The Government found itself compelled to take steps to meet this demand, because it had greatly increased its issue of paper currency and locked up its currency and gold standard reserves to a large extent in securities which, owing to the war, could not be realised except at a serious loss; so that in order to maintain the convertibility of its paper currency, it had to issue rupees to meet the demand. In the year ending with 31st March 1919 the Government of India imported 236 million ozs. of silver, while the world's new production in that year was less than 200 million ozs. This excessive demand of India for silver, together with the demand from other countries, led to a very rapid rise in the world price of silver measured in gold, and on 31st January 1920 the price of silver in New York was 133 cents per fine oz., as compared with the average price in 1913 of 61 cents—that is to say, on that date an ounce of gold would only command in New York 15·5 ozs. of silver, whereas in 1913 it commanded 34 ozs. On the same date the quoted price of standard silver in London was 83*d.* per oz., while in 1913 the average price was 28*d.* On the same day gold sold in London at 117*s.* sterling per oz., as compared with the 85*s.* per oz. at which it sold before the issue of the practically inconvertible paper currency; so that in London on that day the ratio between gold and silver was 15·7 to 1—or nearly the same as in New York.

In India, during the war and for some time after the Armistice, while the import of gold was severely restricted, and silver was imported in immense quantities, the value of gold measured in silver or in rupees naturally rose very rapidly with little regard to the ratio between them in the world outside. Before the war the price of gold remained practically constant at about Rs. 24 to the tola of 180 grains—that is 7·5 grains to the rupee—and the price of the sovereign was Rs. 15. But in the beginning of September 1919 gold was selling in Bombay at Rs. 32 per tola (5·6 grains to the rupee), which would give the price of the 113 grains of fine gold contained in the sovereign as Rs. 20. In September 1919 the Government of India began to sell considerable quantities of gold in the open market, with the effect of bringing down the price of gold by 31st January 1920 to about Rs. 27 per tola—that is, 6·7 grains to the rupee; while on the same date, owing to the great increase in the value of silver as measured in gold, chiefly caused by India's excessive demand for silver for purposes of coinage, the rupee was quoted in London at 28*d.* sterling (compared to the pre-war rate of 16*d.* per rupee). When allowance is made for the low gold value of the pound sterling, which was then equivalent only to 72 per cent. of the sovereign, this means that on 31st January 1920 a rupee would buy in London 9·6 grains of fine gold, while in India, owing to the restricted supply of gold, a

rupee would only buy 6·7 grains; and on that date, while both in London and in New York an ounce of gold would buy only about 15·5 ozs. of silver, it would in India buy 23·5 ozs.

Secretary of State's Announcement.

On 2nd February 1920—that is, about three years ago—the Secretary of State for India surprised the world by announcing that he would aim at giving the rupee a fixed value in exchange of Re. 1 for 11·3 grains of fine gold—that is, one-tenth of the gold content of the sovereign; that the sovereign would be made a legal tender in India at the ratio of Rs. 10 (instead of the pre-war ratio of Rs. 15) to one sovereign; that the import and export of gold would soon be freed from Government control; and that the prohibition on the private import and export of silver would be removed in due course. This announcement had an immediate effect in greatly reducing the price of gold in India expressed in rupees, and by 19th February 1920 the value of the sovereign coin in India had fallen from Rs. 17 to Rs. 15, at which rate it was then still legal tender. On 20th June 1920 the Government of India announced that the restrictions over imports of gold bullion were removed; that sovereigns would cease for the time to be legal tender; and that they would submit a Bill prescribing the new ratio of one sovereign to Rs. 10, at which the sovereign would again become legal tender. (The necessary Act was passed on 15th September 1920.) Accordingly, since 12th July 1920 there has been no restriction on the import into India of either gold or silver bullion or sovereigns, and India has been able to obtain as much as she wants either of gold or of silver. Her excessive demand for silver, which was largely due to her being prevented from getting as much gold as she wanted, has now ceased; and as other countries also, such as China and South America, had been prevented from obtaining the gold they wanted and were now able to satisfy their requirements and thus increase the world's effective demand for gold, while at the same time reducing its effective demand for silver, the consequence of this removal of restrictions was a rapid fall in the value of silver as measured in gold, and an equalisation of the ratio between gold and silver all the world over. By 31st January 1922 that ratio, which in 1913 was about 34 to 1, and on 31st January 1920 was 15·5 to 1 both in London and in New York, but 23·5 in India, had become about 31 to 1 in all three countries. According to the quotations it is still at about that figure—that is to say, at present pretty well all the world over an ounce of gold exchanges for about 31 or 32 ozs. of silver, which is not a very different ratio from that which prevailed in 1913, when it was 34 ozs. of silver to 1 oz. of gold. This change in the value of silver as measured in gold can perhaps be best understood from the New York prices of foreign silver in cents per fine ounce, which were in 1913, 61 cents; on 31st January 1920, 133 cents; and on 31st January 1923, 64·8 cents—that is, much the same as in 1913. The London prices, which are quoted in pence sterling per ounce 925 fine, were: in 1913, 28*d.*; on 31st January 1920, 83*d.*; and on 31st January 1923, 31·4*d.*—again not much above the 1913 price.

Changes in the Value of the Rupee.

In India, when, owing mainly to her excessive demand for silver, the world price of silver measured in gold rose very rapidly, the value in international exchange of the rupee coin, which had been much below the value of the 165 grains of fine silver contained in it, naturally rose with the rise in the value of silver bullion until on 31st January 1920 the rupee was quoted in London at 28*d.* sterling, as compared with the 16*d.* at which it had long stood up to the outbreak of war—that is to say, the value of the rupee in pence sterling had nearly doubled, and, as already said, it was on that date worth in London 9·6 grains of fine gold, as compared with the 7·5 grains it was worth up to 1914. But when, owing to the removal of the restrictions on the movements of gold and silver bullion throughout the world, the effective demand for gold increased and the effective demand for silver decreased, so that the value of silver, whether measured in gold or in sterling or in rupees, fell greatly, the bullion value of the rupee fell along with it. For some time the value of the rupee in international exchange corresponded closely with the value from day to day of the 165 grains of silver contained in it; so that for the time being the rupee was again linked with silver, as it had been before the Indian Mints were closed to coinage in 1893. As the gold value of silver fell, so did the value of the rupee in international exchange, until on 23rd May 1921 the London rate of exchange was only 15*d.* to the rupee; and as on that date the British paper pound was worth only 81 per cent. of the gold in a sovereign, this price of the rupee was equivalent to little more than 12*d.*

measured in gold—that is to say, it was then worth in London only about 5·6 grains of fine gold, as compared with the 7·5 grains it was worth before the war, and with the 9·6 grains it was worth in London on 31st January 1920—only 16 months before. Since then the value of silver has risen somewhat, as is shown by the rise in the New York quotation for foreign silver, which has risen from 59 cents on 23rd May 1921 to 64·8 cents on 31st January 1923; and there is no doubt this had some effect in raising the value in exchange of the rupee; but the rupee is no longer closely linked with silver, as it has not closely followed the price of silver in its downward course. On 31st January 1922 the exchange value of the rupee in London was 15·6*d.* sterling, or much the same as it was before the war, as compared with the 28*d.* which it had reached on 31st January 1920, before the announcement of the Secretary of State's new policy. On 31st January 1923 it was 16·5*d.* sterling, or little above what it was a year before or in 1913. But it is to be remembered that a penny sterling does not now mean the 240th part of the gold in a sovereign, but the 240th part of the value of a paper pound, and, as the paper pound is now worth 95·7 per cent. of the sovereign, this means that on 31st January 1923 the value of the rupee measured in gold in London was only 15·8*d.*, as compared with 16*d.* before the war. Still this is a substantial improvement on its value a year ago, which, measured in gold, was then 13·7*d.* During the last 12 months the rupee has risen in gold value along with the rise in the gold value of the British paper pound. In other words, on 31st January 1923 the rupee was worth in London 7·4 grains of fine gold, as compared with the 7·5 grains it was worth before the war, and as compared with the 9·6 grains it was worth in London on 31st January 1920, and with the 6·5 grains it was worth a year ago. Thus the rupee has nearly attained the value in international exchange as measured in gold which it possessed before the war, but is still very far short of the value of 11·3 grains of fine gold aimed at by the Secretary of State in his announcement made three years ago. In 1913 the rupee, which was then a mere token coin representing one-fifteenth of the gold in a sovereign, although it contains only 165 grains of fine silver, bought either in London or in India about 255 grains of silver. On 31st January 1920, when there was such an excessive demand for silver in India, it bought only about 157 grains, but on 31st January 1923 it bought in London 233 grains, in India about 217 grains—that is to say, it bought enough fine silver to make 1·31 rupee coins, and to that extent it has become unlinked from silver.

India's Stock of Gold and Silver.

From time immemorial India has been a great absorber of the precious metals. From 1835 to 1919 India imported net £316 million worth of gold, of which more than half was imported since 1900. I reckon that at present the quantity of gold in the possession of mankind is about 1,000 million ozs.—enough to make 4,250 million sovereigns—and that of this quantity India possesses about 100 million ozs.—about one-tenth of the world's total stock. And as less than 6 million ozs. is in the Government Treasury, nearly the whole of this large quantity is held by the people in the form of ornaments or hoarded coin or bullion. During the five years before the war she was absorbing on the average 5 million ozs. per annum—nearly one-quarter of the world's new production. During the war she was only allowed to absorb an average of less than 2 million ozs. per annum; but, when the restrictions on the movements of gold were relaxed, she at once took advantage of her recovered liberty, and during the 12 months ending with March 1920 absorbed 6 million ozs. This, apparently, satisfied her demand for the time being, as during the following 12 months she absorbed less than 1 million ozs., and, partly no doubt owing to the poor harvests in 1920–1, she during the 12 months ending with March 1922 exported net half a million ozs. More recently, however, she has again begun to outbid the United States for the gold available in the London market, this change being no doubt partly due to last year's good harvest and the prospect of another good harvest next May. During the calendar year 1922 India imported from this country alone gold to the value of £12·8 million—about 3 million ozs.—besides 46 million ozs. of silver. The total quantity of gold held in India includes nearly 100 million coined sovereigns, which before the war were legal tender at the rate of Rs. 15 per sovereign, and were coming into circulation, especially in the Punjab. But now that they have been made legal tender for only Rs. 10, in accordance with the Secretary of State's policy, the sovereign is no longer in circulation in India, because no one will tender it for Rs. 10 when he can get for it in the Bazaar over Rs. 16. For the time being, therefore, gold, even in the form of sovereigns, is out of the reckoning as regards circulation.

India also contains an enormous quantity of silver, much of it in the form of ornaments. From 1835 to 1919 she imported net 2,900 million ozs., more than one-third of the world's production during that period. But, as the Mints have for the last 30 years been closed to the coinage of silver, except on Government account, the uncoined silver is not available for purposes of circulation. Practically, therefore, the currency available for circulation includes only the coined rupees and the Government's currency notes. The success attained before the war in keeping the exchange value of the rupee stable at 16*d.* gold was due to the closing of the Mints and the consequent limitation in the number of papers available for circulation, while owing to the increase in India's trade and prosperity, the demand for rupees rose, until the rupee was worth much more than the value of the silver contained in it. It could not rise except by a fraction above 16*d.*, because the Government was bound to accept a sovereign as the equivalent of Rs. 15; so that if at any time the exchange value of the rupee rose above 15*d.*, it would have paid to import sovereigns into India and to pay debts in sovereigns instead of in rupees. Even before the war the Government of India, tempted, no doubt, by the great profit it could secure by coining cheap silver into rupees, each of which could be issued as a token coin equal in value to one-fifteenth of a sovereign, added greatly to the rupee coinage, and during the 14 years ending with 1913 no fewer than 1,600 million new rupees were coined. Then when, as already explained, the Government of India, in consequence of the restrictions on the import of gold during the war, found it necessary in order to maintain the convertibility of its note issue to obtain immense quantities of silver from abroad and coin it into rupees, during the three years ending with 31st March 1919 the net coinage amounted to no less than 1,034 million rupee coins, making a gross addition to the silver currency since the beginning of the century of over 2,600 million rupee coins. It is unlikely that any large number of these coins have been melted and turned into bullion or ornaments, because the 165 grains of silver contained in the rupee coin could generally be bought in the Bazaar at much less cost than Re. 1. Making allowance on the one hand for the quantity of rupees in India in the year 1900 and for the number of rupees melted since, it may be estimated that there are at present in existence about 4,000 million rupee coins. A very large number of these coins are hoarded by the people, but if it became worth their while to spend them, might become available for circulation. When the harvests are good and the people are prosperous they hoard rupees in large numbers. When the harvests are poor they produce their hoarded rupees and send them into circulation; so that the quantity of rupees in actual circulation is apt to vary from time to time, partly for this reason and also in consequence of changes in the level of prices measured in rupees.

Currency Note Issue.

While the Government of India have thus added greatly to the number of rupee coins in existence, they have also greatly increased the quantity of currency notes in circulation, as will be seen from the following statement:—

Indian Paper Currency Reserve (Millions of Rupees).

——	31st Mar. 1914.	31st Dec. 1921.	31st Dec. 1922.	22nd Aug. 1925.
Note circulation - - - - - -	661	1,725	1,742	1,871
Reserve:—				
Silver coin and bullion in India - -	205	740	866	877
Gold coin and bullion in India - -	224	243	243	223
Gold coin and bullion in England - -	92	—	—	—
Government of India securities - -	100	684	574	571
British Government securities - -	40	58	59	200
	661	1,725	1,742	1,871

The total note circulation has increased from Rs. 661 millions on 31st March 1914 to Rs. 1,742 millions on 31st December 1922—that is to say, it has nearly trebled. If my estimate of 4,000 million rupee coins as the quantity now in existence in India is correct, this means that the total amount of legal tender money, apart from gold, now in India is about 5,700 million rupees—or about Rs. 18 per head of population. The addition to the quantity of rupees and notes since 1914 has been approximately—rupee coins 1,034 million, notes to the value of 1,081 million, total Rs. 2,115

million. It is true that a very large proportion of these rupees and notes are either held in reserve by Government or are hoarded by the people, and I see that Mr. Findlay Shirras, in his book on "Indian Finance and Banking," estimates that on 31st March 1919 the active circulation of rupees and notes was Rs. 3,620 millions, which gives an average per head of Rs. 11·4, as compared with 7·5 in 1914. But the whole of the rupees and notes in existence in India could be made available for purposes of circulation if the holders were willing to use them for that purpose. My point is that at present gold is practically out of circulation in India, and the rupee coin is no longer linked either with gold or with silver, but, so far as international exchange is concerned, is merely an inconvertible unit of currency subject to the law which regulates all inconvertible currencies—that is to say, liable to change in its value measured in gold according to changes in the relation between the total available supply of the currency and the total effective demand for it—and that the total available supply of this inconvertible currency has in recent years been enormously increased.

When the people of India have more rupees than they have an immediate use for, whether for purposes of circulation or hoarding, the rupee coins flow back into the Government Treasuries, and, as will be seen from the above statement, the quantity of silver coin and bullion held in the Currency Reserve in India has increased from Rs. 205 million on 31st March 1914 to no less than Rs. 866 million on 31st December 1922—more than one-fifth of all the rupee coins in existence—the increase during the past year being Rs. 126 million, which affords strong evidence that the total amount of rupees and notes is at present much larger than India really requires for all purposes. It is unfortunate that the Government of India should have felt itself compelled in the three years ending with 31st March 1919 to coin over 1,000 million new rupees and so add to the total of legal tender money in existence. It was compelled to do so in order to maintain the convertibility of its immense issue of currency notes, and the mistake apparently was to allow the quantity of currency notes in circulation to reach such a high figure. It is usually supposed that a bank or a Government makes a profit out of its note issue, and to a certain extent this is true, but in the case of India there must have been a serious loss to the Government from its excessive issue of notes. It was compelled, in order to maintain the convertibility of the notes, to purchase an immense quantity of silver from outside India (mainly from the United States), at a time when silver as measured in gold was excessively dear. The coinage of over 1,000 million rupee coins in those three years must have cost a large sum apart from the cost of the silver, and now the Government of India has to store and guard 866 million rupee coins, besides gold coin and bullion to the value of 24 million sovereigns, and to find the interest on the 574 million rupees' worth of Government of India securities held in the Currency Reserve. Altogether, if a calculation were made, it would probably be found that during the last eight years the Government of India's increased issue of currency notes has involved it in a serious net loss.

The Gold Standard Reserve.

Since the Mints were closed to the free coinage of silver in 1893, the cost of the 165 grains of silver contained in the rupee coin has generally been much below Re. 1, so that a large profit has accrued to the Government from the coinage of new rupees on Government account. This profit has been placed to what is called the Gold Standard Reserve, to which also the interest on the accumulated funds is carried. This reserve, which on 31st March 1914 amounted to 25·5 million pounds, is now (31st December 1922) £40,000,000 sterling, practically all held in short-dated British Government securities. The existence of this reserve has no doubt helped to give a feeling of confidence, but it has so far had very little effect on the rate of exchange.

India's Balance of Trade.

In estimating India's balance of trade it is necessary to include imports of Government stores into India, because India has got to pay for them by exports. It is also necessary to include the large imports of gold and silver, whether on Government or private account, because they also have to be paid for by exports from India, and because the gold and silver are imported into India not so much in order to adjust the balance of trade as to meet the demand of the Indian people for the precious metals for the purposes of ornaments and hoarding. So reckoned, the average visible net exports of merchandise from India for the five years ending with 1913–1

were 48·4 million pounds, and the average net import of treasure during those five years was £26,000,000. Putting merchandise and treasure together the average net export was 22·4 million pounds. These figures represent the visible exports and imports, but India has to pay each year a large sum in addition to the value of the visible imports for the year, representing (1) interest on capital belonging to residents in foreign countries which has been invested in India, whether by way of loan to Government or to private companies, or to establish industries in India; (2) payment for services rendered to India by foreigners, whether in the Army or the Civil Services, or in private capacities, such as shipping, banking, insurance, and industrial undertakings, in so far as the remuneration for such services is payable outside India, or is remitted to other countries by residents of those countries, or is payable by way of pension to foreigners who have returned to their own countries and who take payment of their pensions outside India. All these payments have to be made by India in the form of an excess of visible exports over visible imports. On the other side would have to be reckoned any new investments made in India during the year. But in ordinary times these invisible imports are much less than the invisible exports, and this is the main reason why on the average of the five years before the war India's visible exports exceeded India's visible imports, including treasure, by 22·4 million pounds; and why in ordinary course it is to be expected that India's visible exports will greatly exceed her visible imports.

Council Draft.

A large proportion of the payments which have to be made by India to foreign countries on such accounts, which are not counterbalanced by visible imports during the year, are made through the Secretary of State for India in London, through whom has to be paid the interest due by the Government of India to British investors who have lent money to the Government of India on terms requiring them to be paid the interest in London, and through whom have to be paid claims for the services of the British Army in India, and pensions and leave allowances payable to officers both of the Army and of the Civil Services who have returned permanently or temporarily to this country. These payments, which have to be made by India through the Secretary of State in London, amount to a large sum, approximating in ordinary times to £25,000,000 per annum. In order to obtain funds to make them the Secretary of State many years ago established a system of selling Council Drafts—that is, orders for the payment in India from the Government Treasury of so many rupees, which are sold in the open market in London in return for credits in sterling payable in London, which are paid to the Secretary of State in London by the purchasers of the Drafts in return for the orders which they require to enable them to obtain rupees in India to pay there for exports from India, or to meet other debts payable in India. On the average of the five years ending with 1913–4 the Council Drafts paid in India amounted to 27·6 million pounds. From the point of view of the balance of trade these Council Drafts are of the nature of invisible exports from India which go towards adjusting India's indebtedness to foreign countries, although nothing passes between England and India, except bits of paper, which enable the Secretary of State to pay India's debts in London in sterling by an actual payment of rupees from the Treasury in India. That is to say, they are transfers of credit. In selling Council Drafts the Secretary of State generally fixes the amount he is willing to sell and the lowest rate he is willing to take, and accepts up to that amount the best offers he can get in the London market. There are other ways in which a merchant who has to pay for goods in India can obtain Indian exchange, and if the Secretary of State were to offer Council Drafts at a minimum rate materially above the market rate of the day, he would get no demand for them. On the other hand, if the minimum rate that he offers to take is more favourable than the market rate, merchants and others requiring a credit in rupees in India compete for the Drafts and in this way the Secretary of State is able to obtain a fair rate. He has, however, very little power by selling Council Drafts to force the rate of exchange permanently either up or down. That depends upon the value in international exchange of the British pound sterling, which is at present practically inconvertible, and of the Indian rupee coin, which is also at present inconvertible into gold at any fixed rate, and on the relation between the demand for credit in India and the supply of it, which varies from day to day according to the course of trade. As a matter of fact for some time past the sale of Council Drafts had been stopped and the market and the Secretary of State and the merchants got along without them. Recently the

Secretary of State has resumed the sale of Council Drafts, and on 23rd January sold 75 lakhs of rupees at about 17*d.* sterling, or almost exactly 16*d.* measured in gold.

In 1920, in the vain endeavour to stem the rapid fall which, as already explained, was then taking place in the exchange value of the rupee, the Secretary of State sold in India Reverse Councils (that is, Drafts payable in sterling in London by the Secretary of State in return for rupee credits paid to the Government in India), at rates much more favourable than merchants were able to obtain in the open market. The loss incurred by the Government of India in this futile attempt to regulate the exchange amounted to 28 crores of rupees—over £18,000,000 sterling.

One beneficial effect of the great rise which took place in the gold value of the rupee (owing mainly to India's urgent demand for silver), combined with the restrictions placed upon the export of cereals from India, was that the rise of prices, which caused so much hardship and disturbance in this country, was felt much less in India, though there too it was considerable. In July 1920, when the Index Number for the cost of living in this country (taking the cost in July 1914 at 100) was 255, it was in Bombay only 189; in October last the Index Number for cost of living in this country was 180, while in Bombay it was 162.

The Babington-Smith Committee of 1919.

An admirable and authoritative explanation of the Indian Currency System and its Developments will be found in a paper written by my old friend, the late Sir William Meyer, who was Finance Minister in India during the war, and published in the Journal of the Royal Society of Arts for 30th April and 7th May 1920. That paper gives a summary of the Report of the Babington-Smith Committee on Indian Exchange and Currency, which was submitted towards the end of 1919, and formed the basis of the Secretary of State's announcement of February 1920. But it is to be remembered that, when Sir William Meyer wrote the paper, the gold price of silver, and therefore the exchange value of the rupee, were still very high. Probably if that Committee were again to sit and to take into account the fall which has since taken place in the gold value of silver and in the exchange value of the rupee, their recommendations would be very different from what they then were. The great mistake they made was in supposing that the gold value of silver would continue at such a high rate as to support a rate of exchange of the rupee much higher than the 16*d.* which had been the standard for a number of years before the war. As I have already pointed out, at the date of the Secretary of State's announcement in February 1920 the price of silver per ounce 925 fine was in London 83*d.* sterling, as compared with 28*d.* in 1913, and was in New York 133 cents per fine ounce, as compared with 61 cents in 1913. Both quotations gave the ratio of gold to silver as then about 15·5 ozs. of silver equal to 1 oz. of gold, while in 1913 the ratio was 34 to 1. On that date in 1920 the exchange value of the rupee was 28*d.* sterling, as compared with 16*d.* before the war. Now the price of silver has fallen to 31·4*d.* sterling per standard ounce and to 64·8 cents per fine ounce, both of which quotations make the ratio of gold to silver about 32 to 1, as compared with the pre-war ratio of 34 to 1, and the exchange value of the rupee is now not much above 16*d.* sterling —the pre-war rate. If the Babington-Smith Committee had foreseen that the price of silver and the exchange value of the rupee would fall so rapidly within the next three years, it is very improbable that they would have encouraged the Secretary of State to aim at making the rupee worth 24*d.* in gold.

I may be pardoned if I recall that, in a memorandum dated 17th July 1919, submitted to the Committee, I pointed out the likelihood of a fall in the demand for silver that would take place so soon as the restrictions on movements of gold were removed, and said that by 1922 the price of silver (which was then 53*d.* per oz.) might be as low as 30*d.* On 15th December last it was quoted in London at 30·4*d.*, so that my warning has proved to have been well-founded. At the same time I recommended that the Government of India should announce that it would make it its aim to restore the exchange value of the rupee to 16*d.*—that is, to one-fifteenth of a sovereign, or 7·53 grains of gold, as the policy most likely to be successful and fairest to all the interests concerned. The course of events adds strength to that proposal.

When the price of silver falls so low that the cost of making a rupee coin is much below the value of the coin in exchange either with gold or with commodities, there is a temptation to the Government to issue new rupee coins in order to obtain the profit on coinage. There is also a temptation to coiners to issue counterfeit rupees of the same fineness as the standard rupee, and therefore difficult to detect. At the present

price of silver in Calcutta anyone in India can buy the 165 grains of fine silver required to make a standard rupee for 12 annas, and if he can succeed in making and issuing a false rupee of the standard fineness he will get 16 annas for it—a profit of 33 per cent. on the cost of the silver, less the costs of alloy, manufacture and issue. Before the war there was a similar temptation to issue false coinage, which was only counteracted by severe penalties, and it is obvious that the greater the difference between the exchange value of the rupee and the value as bullion of the silver contained in it, the greater will be the temptation to attempt to counterfeit the coinage.

The future Price of Silver.

It seems probable that there will soon be a further fall in the value of silver, whether measured in gold or in rupees or in commodities. In the United States in 1918, mainly in order to meet the needs of the Indian Government, a measure was passed called the "Pittman Act," authorising the sale by the American Government to other Governments of up to 350 million silver dollars from the holdings in her Reserves, and of this amount no less than 200 million dollars were allotted to India at a price of 101½ cents per fine ounce. Altogether under the Pittman Act the amount of silver sold from the United States Reserves was 208 million ozs., and, in accordance with the provisions of that Act, this amount has had to be replaced in the Reserves by the purchase of silver mined in the United States at the price of 1 dollar per ounce. That is the reason why one sees in the daily quotations two prices given for silver in New York. For instance, on 31st January last, while American mined silver was quoted at 99⅝ cents, foreign bullion was quoted at only 64¾ cents per fine ounce. It is the so-called foreign bullion quotation which gives the world price of silver other than the favoured silver mined within the United States. Of the 208 million ozs. to be so replaced, 149 million ozs. have been bought, leaving a balance of 59 million ozs., which, at the rate at which purchases have recently been made, should be completed next autumn. Thereafter, unless new legislation is passed in the United States, the whole of the American produce will have to compete with the rest of the world production in a free market, and will be added to the world's available supply of silver. At the same time the world's demand for silver is likely to go on decreasing. Our own Government, having reduced the quantity of fine silver in the silver coinage, has become a seller of silver. The Indian Government, having an enormous number of rupees lying in its Reserve Treasury, is unlikely to resume coinage for years to come. On the whole it seems probable that there will be a further fall in the world price of silver, and that the price in New York, which is at present about 65 cents per fine ounce, will fall below the price of 61 cents per fine ounce, which was that of 1913; and it is to be remembered that so recently as 1915 the price of silver in New York was only 51 cents per fine ounce. Similarly the price of standard silver 925 fine in London, which is now about 31*d.*, seems likely soon to fall below the 28*d.* which was its price in 1913, and may even fall as low as the 24*d.* sterling which was its quoted price in 1915. Any fall in the price of silver that may take place will increase the temptation to issue counterfeit rupees, and any further rise in the exchange value of the rupee coin, whether or not it is accompanied by a fall in the present price of silver, will also increase that temptation and make it more and more difficult to maintain the exchange value of the rupee.

Conclusion.

To sum up, the present position as regards the rupee is that it is no longer, as it was before the war, a mere token coin representing one-fifteenth of the gold in a sovereign—that is, 7·5 grains of fine gold. It is now the unit of a currency inconvertible into gold at any fixed rate, and its present value in gold is in London about 7·4 grains—or very nearly what it was before the war, notwithstanding the Secretary of State's announcement of policy three years ago that he would aim at making it equal to 11·3 grains. It is now (on 31st January 1923) worth in sterling about 16·5*d.*, which is equivalent to 15·8*d.* measured in gold—only a fraction short of its pre-war value of 16*d.* measured in gold. The Secretary of State's *brutum fulmen* of 1920, although at the time it had a disastrous effect in making many people believe that the gold value of the rupee would remain at something like 24*d.*, or one-tenth of a sovereign, and act on that belief, has now no practical influence on the rate of exchange. As in the case of all inconvertible currencies, the value of the rupee, whether measured in gold or in commodities, now varies according to the relation between the demand and supply of rupees and the demand and supply of gold or of commodities. The supply of rupees, whether in the form of coins or

currency notes, has been very greatly increased in recent years by the action of the Government of India, and this must have a great effect in keeping down the exchange value of the rupee. Now that the Government of India have stopped the coinage of more rupees and the issue of additional currency notes, the supply of legal tender currency in India is practically stationary, and the recent rise in the exchange value of the rupee measured in gold must be due to an increase in the demand for rupees whether for the purposes of currency or for hoarding, much in the same way as the value of the rupee gradually rose after the Mints were closed to free coinage in 1893. But it is possible, though it is to be hoped not probable, that a decrease in the demand for rupees, whether owing to bad harvests in India or to any other cause, may lead to a fall in the exchange value of the rupee. Apart from any such calamity, or from the appearance in circulation of any large proportion of the enormous amount of rupees at present hoarded by the people of India, it seems possible that an increasing demand for rupees may lead to a further improvement in its exchange value, unless the Government of India are so ill-advised as to increase the supply, whether of rupees or notes. But it is evident that any such improvement in the exchange value of the rupee must be a very slow one, and it is impossible to imagine that for many years to come the rupee will rise in exchange value to the Secretary of State's figure of 11·3 grains to the rupee—that is, one-tenth of a sovereign.

A further rise in the exchange value of the rupee would be favourable to Indian finances in so far as India has to pay external debts in gold or in sterling. It would also tend to cause a fall in prices measured in rupees in India, and would therefore be favourable to all who receive salaries or wages fixed in rupees, and to all creditors in India whose credits are fixed in terms of rupees. On the other hand, it would be unfavourable to all producers of commodities in India, and especially to the great mass of the agricultural population who have produce to sell, and to all debtors in India whose debts are fixed in rupees. On the whole it seems to me that the fairest and most practical solution of the question would be to abandon the attempt to raise the value of the rupee to anything like 11·3 grains of fine gold, and to aim at the permanent re-establishment of the pre-war rate of 7·5 grains of fine gold —that is, one-fifteenth of a sovereign, or 16*d.* per rupee measured in gold. I think that the Secretary of State should announce this to be his policy, and that the Government of India should pass an Act declaring that the sovereign shall again be legal tender for Rs. 15. This would prevent the gold value of the rupee from rising above one-fifteenth of a sovereign and might lead to the reappearance of the sovereign as part of the currency in circulation in India. Whether the Government of India would be able to keep the value of the rupee up to one-fifteenth of a sovereign would depend upon the relation between the supply of rupees and the demand for them. It would be assisted to keep that level, if it were to take steps to reduce the supply of currency notes and were to accumulate still more rupee coins in its Reserve Treasuries. This is an expensive measure, and it is somewhat absurd to see 866 million rupee coins lying uselessly in the Treasuries; but it is so important to stabilise the exchange value of the rupee, whether at one-fifteenth of a sovereign or at some other figure, that it would be worth while to submit to some comparatively small loss, such as would be incurred by reducing the note circulation or even by melting a large number of rupees and selling them as bullion, and some action of the sort should now be taken. If this were done, there is reason to hope that the rupee would at once be again stabilised at its pre-war value of one-fifteenth of the gold in a sovereign, to the great advantage of India's trade and to the interests of justice as between creditors and debtors.

QUOTATIONS.

Quotations.	Where quoted.	In 1913.	31st Jan. 1920.	31st Jan. 1922.	31st Jan. 1923.
Pound sterling in dollars	London	4·87	3·505	4·279	4·648
	New York	4·87	3·522	4·272	4·648
Price of gold per fine ounce in shillings sterling	London	85	117	96·5	88·8
Price of silver in pence sterling per ounce 925 fine	"	28	83	35·2	31·4
Price of silver (foreign) in cents per fine ounce	New York	61	133	66·1	64·8
Exchange value of rupee in pence sterling	London	16	28	15·6	16·5
Price of gold in Calcutta in rupees per tola of 180 grains fine.	Calcutta	24	27	28·6	26·6*
Price of silver in Calcutta in rupees per 100 tolas of 180 grains fine.	"	70	115	93·0	82·9*

NOTE.—The sovereign contains 113 grains of fine gold; the dollar contains 23·22 grains of fine gold; and the rupee contains 165 grains of fine silver. An ounce of gold or silver is 480 grains.

* 10 January 1923.

VALUE OF THE RUPEE MEASURED IN GOLD AND SILVER.

——	In 1913.	31st Jan. 1920.	31st Jan. 1922.	31st Jan. 1923.
Value of the pound sterling in grains of gold	113	82	99·5	108·1
Value of the pound sterling as a percentage of the sovereign.	100	72	88·1	95·7
Value of the sovereign (113 grains of gold) in rupees—				
In London	15	11·9	17·5	15·2
In India	15	17	17·9	16·7
Value of the rupee in grains of gold—				
In London	7·5	9·6	6·5	7·4
In India	7·5	6·7	6·3	6·8
Value of the rupee in pence sterling in London	16	28	15·6	16·5
Value of the rupee in pence measured in gold in London.	16	20	13·7	15·8
Value of the rupee in grains of silver—				
In London	253	149	197	233
In India	257	157	194	217*
Ratio of gold to silver—				
In New York	34	15·5	31·3	31·9
In London	34	15·7	30·5	31·4
In India	34	23·5	30·8	32·1*

* 10th January 1923.

Article on "The Indian Currency Policy," by Sir James Wilson, K.C.S.I., dated 8th September 1925.

On 31st August 1925 the quotations were as follows:—In London: price of gold, 84·96*s*. per fine ounce; price of silver per ounce 925 fine, 32·88*d*.; rate of exchange of the rupee, 18·16*d*. In New York: the pound sterling, 4·855 dollars; price of fine silver, 71·75 cents per ounce. In Bombay: on 11th August gold was quoted at Rs. 21·44 per tola of 180 grains, the sovereign at Rs. 13·83, and fine silver at Rs. 72·4 per 100 tolas. These quotations give the following values:—

VALUE OF THE RUPEE MEASURED IN GOLD AND SILVER.

——	In 1913.	31st Jan. 1920.	31st Jan. 1922.	31st Jan. 1924.	31st Aug. 1925.
Value of the pound sterling in grains of gold	113	82	99·5	99·3	113
Value of the pound sterling as a percentage of the sovereign.	100	72	88	87·9	100
Value of the sovereign (113 grains of gold) in rupees—					
In London	15	11·9	17·5	15·9	13·2
In India	15	17·0	17·9	16·3	13·8
Value of the rupee in grains of gold—					
In London	7·53	9·6	6·5	7·1	8·5
In India	7·53	6·7	6·3	6·9	8·4
Value of the rupee in pence sterling in London	16	28	15·6	17·2	18·2
Value of the rupee in pence measured in gold in London.	16	20	13·7	15·1	18·2
Value of the rupee in grains of silver—					
In London	253	149	197	229	245
In India	257	157	194	222	249
Ratio of gold to silver—					
In New York	34	15·5	31·3	32·7	28·8
In London	34	15·7	30·5	32·2	28·7
In India	34	23·5	30·8	32·0	29·6

During the last 19 months the measures taken by the British Parliament have resulted in restoring the British paper pound sterling to the value of a sovereign, that is, 113 grains of fine gold, as compared with the 99 grains it was worth in January 1924. The rupee has risen in value in sterling from 17·2*d*. to 18·2*d*.; but as in January 1924 the pound sterling was worth only 88 per cent. of the sovereign, the rise in the value of the rupee, when measured in gold, has really been from 15·1*d*. to 18·2*d*.—in other words, the rupee, which before the war was worth 7·53 grains of gold, and in January 1924 was worth only about 7 grains, now exchanges for 8·5 grains in London and for 8·4 grains in Bombay; and the sovereign, which before

the war exchanged for Rs. 15, and which in January 1924 was worth about Rs. 16, now commands in Bombay only Rs. 13·8. This rise of about 20 per cent. in the gold value of the rupee during the last 19 months has greatly altered the Indian currency position.

The Royal Commission, which has recently been appointed to report on the Indian exchange and currency system and practice, will no doubt consider whether an attempt should be made to fix the rate of exchange of the rupee in terms of gold, as it had been fixed for a number of years before the war. If that were done, the rupee prices of commodities would tend to vary with gold prices, and as one of the chief objects to be aimed at is the stability of commodity prices, it will be for consideration whether in the future gold is likely to form the best basis of currency from the point of view of stability. According to Sauerbeck's series, in the United Kingdom the wholesale gold prices of commodities in general use rose between 1896 and 1913 in the proportion of 61 to 85, that is, at the rate of 1·4 points per annum. There can be little doubt that one of the chief reasons for this rise of gold prices (in other words, fall in the commodity value of gold) was the great addition to the world's stock of gold due to the increase in production which took place after 1890. If there had been no great war, and if the new production of gold had continued at the pre-war rate, it seems probable that the rise of gold prices would have continued, and that the average wholesale gold price of commodities in this country might now have been about 17 per cent. above what it was in 1913; that is to say, taking the prices of 1913 as 100, the index-number for this country might now have been about 117. As a matter of fact, according to the statistics published by the League of Nations, in those countries which have kept or brought their paper currencies up to the value of gold, the index-numbers of wholesale commodity prices were in June last: United Kingdom 158, United States 157, Canada 159, Australia (May) 167, New Zealand 174, South Africa (April) 130, Holland 153, Sweden 161, Switzerland 161, Germany 134. These figures are not strictly comparable, but broadly speaking they indicate that the rise in wholesale gold prices in these countries (except Germany) has been about 60 per cent.—in other words, it takes about 16 ozs. of fine gold to purchase wholesale the same quantity of general commodities which would have been purchased for 10 ozs in 1913. This great rise in the gold price of commodities (or fall in the commodity value of gold) can only to a comparatively small extent be due to the increase in the world's stock of gold owing to an excess of new production of gold over the amount of gold lost during those 12 years. It must be mainly due to the great destruction of commodities during the war, to lower production of commodities, and to the fact that the world's effective demand for gold has decreased at a more rapid rate than its effective demand for commodities, owing to the impoverishment of many countries, and to the general withdrawal of gold from circulation.

As regards recent changes, during the 12 months ending with June 1925 the index-numbers (reduced to terms of gold) have altered as follows:—United States from 145 in June 1924 to 157 in June 1925, United Kingdom from 144 to 158, Canada from 150 to 159, Holland from 141 to 153, Sweden from 156 to 161, Switzerland from 159 to 161, Germany from 116 to 134, France from 127 to 134, Italy from 127 to 135, Belgium from 134 to 135, Japan from 164 to 168, India (Calcutta) from 166 to 184. During these 12 months, therefore, there has been almost all over the world a very considerable rise (averaging about 6 per cent.) in the wholesale prices of commodities, when measured in gold—that is, a fall in the commodity value of gold. This seems to indicate that the world's available supply of gold is increasing at a faster rate than the world's effective demand for it, which might be due to the increase of the world's stock of gold owing to new production, to the setting free of reserves of gold, or to the desire of the world's population to purchase commodities rather than gold.

Altogether, to judge from past experience, gold as a basis of currency does not provide an absolutely stable basis for commodity prices. But what is the alternative before India? The United Kingdom and the United States, which are the principal creditor countries, have now currencies directly based on gold, and are not likely to accept any other basis than gold for the payment of the debts due to them, although that means that payment can at present be made in a much smaller quantity of commodities than would have been required before the war to repay debts of similar amounts fixed either in sterling or in dollars. Many other countries have either got back to the gold standard, or are trying to do so, and it seems probable that soon practically all international trade will be conducted on a definite gold basis. Before

the war, when the rupee was merely a token coin, equal in value to one-fifteenth of a sovereign, India's international trade, and even her internal trade, were really based on gold. Now the rupee has no longer a fixed value in relation to gold, nor do fluctuations in the value of silver have any appreciable effect on the gold value or the commodity value of the rupee coin. That depends on the relation between the supply and demand for rupee currency and the supply and demand for other commodities (including gold and silver). The supply of rupee currency is regulated by the Government of India without any automatic control, such as is exercised in the case of sterling or of dollars by the right a creditor has of demanding the equivalent in gold coins which have an intrinsic value of their own, according to the number of grains of gold they contain; whereas the rupee coin, which at present buys about 249 grains of silver in India, contains only 165 grains of pure silver. The Government of India, I venture to think, made a great mistake before the war in rapidly increasing the quantity of rupees and notes, which during the war entailed a period of anxiety and great expense in the endeavour to maintain the convertibility of the currency notes. The Secretary of State certainly made a disastrous mistake in 1920 when he announced that he would aim at giving the rupee a fixed value in exchange of one rupee for 11·3 grains of fine gold—that is, one-tenth of the gold in a sovereign. This experience, together with the experience of many other countries during and since the war, shows the danger of entrusting the management of a currency to any body of men, however capable, honest and impartial, without some automatic check, which would prevent even a partisan or doctrinaire Government from manipulating the currency in the interest of particular classes, and thus possibly inflicting great injury, especially on the poorest of the population. The people of India will be safer with a currency based on gold, although the commodity value of gold is liable to fluctuate, than with one dependent on the varying opinions of any body of men.

Writing in the *Asiatic Review* in April 1924, when the rupee was worth about 7 grains of gold, in place of its pre-war value of 7·53 grains, I urged that the Government should formally cancel the futile announcement of 1920, make the sovereign legal tender in India at the pre-war rate of Rs. 15 to the sovereign, and aim at keeping the gold value of the rupee at that rate. Since then, however, the gold value of the rupee has risen to 8·4 grains of gold, which gives it a value in exchange of over 18*d.* gold, and the sovereign in Bombay now commands only Rs. 13·8. But it must be borne in mind that so lately as 31st January 1922 the rupee was worth only about 6·5 grains of gold, and that only 19 months ago it was worth only about 7 grains, and the recent rise in its gold value to 8·4 grains may prove to be only temporary, as being due not only to the general fall in the commodity value of gold which has taken place over the world as a whole, but to exceptionally good harvests in India, which led to an increase in the demand for rupee currency. If the world's demand for gold increases, or the world's production of commodities overtakes the world's demand, then the general gold price of commodities will fall, the commodity value of gold will rise, and the gold value of the rupee will tend to fall. If India suffers from poor harvests and her exports decrease in comparison with her imports, there will be less demand for rupees, and the people who hold large hoards of rupees may feel compelled to put them into circulation and thus increase the available supply of rupees, which would tend to reduce the gold value of the rupee.

In the interests of stability, therefore, it is desirable to fix the gold value of the rupee below its present value of 8·4 grains. It seems probable that sovereigns may soon come into general circulation in India, as they showed signs of doing before the war; so that it is of greater practical importance to fix the ratio in so many even rupees to the sovereign than in so many even pence to the rupee. I therefore now venture to suggest that the sovereign should be made legal tender in India at the rate of Rs. 14, instead of the pre-war rate of Rs. 15. This would make it equal in value to 8·07 grains of fine gold, and the par rate of exchange would be 17·14*d.* If this were done exchange could not rise appreciably above that rate, as it would then become profitable to import sovereigns into India and use them as legal tender for Rs. 14. The real danger would be, as it was before the war, that the gold value of the rupee might fall below the par rate; and to minimise that danger the Government of India should refrain from coining any more rupees, and should make a large reduction in the quantity of currency notes outstanding, leaving the population to make up the currency required for circulation by utilising the Rs. 877 million now in the Currency Reserve, and a portion of the great quantities of gold and rupees

which are at present hoarded. In that case it would probably never be necessary to draw on the £40,000,000 which the Government still holds in the Gold Standard Reserve.

APPENDIX 90.

Note on Indian Currency and Exchange Problems submitted by Sir M. de P. Webb, C.I.E., C.B.E., of Karachi.

I understand that the object of the present Indian Currency Commission is "to examine and report on the Indian Exchange and Currency System and practice, to consider whether any modifications are desirable in the interest of India, and to make recommendations" (vide the "*Statesman*," Calcutta, of the 24th November 1925).

I have long been a keen student of the Indian Currency and Exchange Systems, and have had over 30 years' practical experience of them in India as a merchant, &c., who successfully survived the crises of 1892–95, 1917–19, and 1920–23. With these experiences behind me, I venture to submit the following points for the consideration of the Commission.

PART I.—DEFINITIONS.

(A) It is essential at the start of any currency discussion that the main functions of the currency in modern civilised countries should be defined. In India, as in all modern, civilised countries, currency, i.e. money, is the Chief Purchasing Tool.

Further, in India, more than in the leading Western countries, money is also used as a Reserve of Purchasing Power to be drawn on in times of need. Money serves in other ways, but the two functions here given are, I submit, the most important.

(B) If, for any reason, the Purchasing Tools of India's 320,000,000 of people become blunted, if the Tools lose in purchasing power, grave injustices, involving possibly very serious hardships, are brought about, especially on small wage earners and on people generally of small means. And such people form a very large proportion of the whole population.

(I am convinced that the rapid popularity obtained by Mr. Gandhi among the masses, and the corresponding wave of ill-will towards Government that appeared in both town and country towards the end of, and immediately after the termination of, the Great War, was largely facilitated by the terrible hardships caused by the Indian currency losing half, or more, of its purchasing power during the War. This loss has not yet been wholly made good, and the general level of prices in India is still some 70 per cent. above pre-war levels.)

Government hear little or nothing of these hardships from those immediately concerned, because the great mass of the people in India are, speaking generally, wholly uninformed as to consequences of short or excessive issues of currency by Government.

(C) Further, not only has the efficiency of India's Chief Purchasing Tool diminished in consequence of the Great War, but all Reserves of Purchasing Power have similarly lost in value. All holders of these reserves have therefore also suffered, though not so severely as the poorest classes of wage earners. These injustices to wage and salary earners have by now been very largely removed by increases of pay.

(D) On the other hand, sudden and considerable *increases* in the Purchasing Power of the currency also involve injustice and, if unexpected, heavy losses on principals engaged in the work of production. For falling prices mean unexpected losses on all stocks of raw products and manufactured goods, and on all goods in course of production. Those who produce are in many cases far better informed and organised than the poorest classes, and so can exert far greater political influence than the vast unorganised mass of small wage earners. If, then, the general fall of prices (i.e. access of Purchasing Power of the country's Monetary Tools) be very great, Government are sure to hear a lot of the matter; and demands will be made that Government turn the situation in favour of the producing, stock-holding, and speculative classes by directly or indirectly putting more money into circulation in order to lessen the value (i.e. purchasing power) of the Money Tools then current.

PART II.—GOVERNMENT'S CURRENCY FUNCTIONS.

(E) Since the closing of the Indian Mints to the free coinage of silver in 1893, and until Government declared sovereigns legal tender in India, the work of issuing new currency in India has been the monopoly of the Government of India. As the ratio

of the rupee to the sovereign is at present fixed at a point which, for the time being, prevents sovereigns being legally tendered in India for purchasing purposes, Government are, in effect, still the only source from which supplies of new currency can be obtained by the public. And as the value, or purchasing power, of India's Money Tools depends upon the volume of those Tools in circulation as compared with the volume of work they are called upon to perform, it is within the power of Government to-day to *augment* or *diminish* the purchasing power of India's Money Tools by respectively *withholding* or *multiplying* new issues of currency.

(F) Rightly used, the expression "stabilisation of the rupee" should mean "stabilisation, as far as practicable, of the *general purchasing power of the rupee*" and not, as often understood, of its purchasing power in relation to the sovereign or pound sterling *only*. And, remembering the grave injustices and hardships inflicted upon great sections of the population by considerable fluctuations in the purchasing power of the country's Money Tools, it is clearly one of the first duties of Government to guard against all such fluctuations as far as humanly possible.

This duty is by no means easy of accomplishment, for fluctuations in internal price levels arising from natural causes (such as exceptionally good rains, or blights or pests), affect sales overseas and later purchases overseas, thereby changing the balance of trade, and so altering the purchasing power of the rupee and of the pound sterling in relation with each other. On the other hand, Government, when dealing with Council Drafts and "Reverse Councils," can raise or lower the foreign exchanges, and so, for the time being, lower or raise internal price levels. To add to the difficulties of the problem, interested organisations at the chief ports often demand currency facilities or exchange policies quite regardless of the consequences on internal price levels, were these organisations' demands acted upon.

(G) I may add in this connection that if Government find it impossible to conduct a currency policy that will not affect the purchasing power of India's Money Tools one way or the other, then I think it would be best in the general interest of India that the general level of internal prices should very slowly and gradually *rise*, rather than steadily and continuously *fall*. This would mean that in periods of prosperity arising from a succession of good seasons in India and good demands overseas for India's surplus products, sterling exchange also would gradually—not rapidly—rise. If internal prices in India were prevented from rising at all (by withholding additional supplies of new currency), then sterling exchange would rise by leaps and bounds. This is objectionable for many reasons. But I see no reason why sterling exchange should not, in such conditions as assumed above, be allowed to move upwards *gradually* to a new level, for the only alternative would be a great rise of prices within India, i.e. a great loss of purchasing power of India's existing Money Tools. And this spells hardship and misery for millions, and the creation of a seedbed of hostility to all ruling authority.

I believe it to be quite possible for Government, notwithstanding erratic political pressure, and conflicting standards of currency management, to steer a middle course along the line indicated above, as indeed, Government appear to have done during the last two years, avoiding both violent fluctuations in sterling exchange, and marked changes in the purchasing efficacy of the rupee within India.

PART III.—REPLIES TO THE COMMISSION'S QUESTIONS OF 24TH NOVEMBER 1925.

(H) With the above definitions and guiding principles in mind, I venture to answer below the nine questions issued in Delhi on the 24th November 1925 to the Press by the Government of India on behalf of the Commission.

1.—(*a*) Is the time ripe for a solution of the problems of Indian currency and exchange by measures for the stabilisation of the rupee, or otherwise? *Answer.*—No, certainly not, if by "stabilisation of the rupee" is meant "attempting to fix permanently the ratio between the rupee and the sovereign or pound sterling."

My reasons for this conclusion are—

(1) Uncertainty as to the future of gold.
(2) Uncertainty as to the future of the European exchanges, most countries in continental Europe being in financial difficulties.
(3) Uncertainty as to Great Britain's ability to maintain parity between the sovereign and the pound sterling so long as her export trade is handicapped by local and national indebtedness of a magnitude unpredecented in her history.
(4) Uncertainty as to the consequences of a succession of bad seasons in India with Indian prices at their present high level relatively to pre-war price levels in India.

It would certainly increase confidence and enterprise on the part of many engaged in foreign trade—but a small number, however, relatively to the whole population—if Government could see their way to announce that they are prepared *at all times* (*a*) to sell pounds sterling at, say, Rs. 13. 3, if the public require remittances to England, and (*b*) to issue additional rupee currency at the current market rate of the day to an extent that would guard against rapid or great rises in sterling exchange, having regard to the necessity of guarding also against rapid or great rises of rupee prices.

More than this, I could not recommend at present.

(*b*) What is the comparative importance of stability in internal prices and in foreign exchanges? *Answer.*—In the interest of India as a whole, I consider that Government should regard stability in internal prices as of greater importance than stability in the foreign exchanges.

This, because of the very great magnitude of India's population, and the small means and consequent helplessness of the vast majority of that population. In such circumstances Government ought to take every possible step to guard against any failure of the people's Money Tools. High prices for non-food products grown in India quickly affect the prices of food and clothing and other simple necessaries, which ought not to be allowed to soar out of the people's reach. So far as rupee prices in India may be affected by issues of new currency, it should be one of the first duties of Government to maintain the efficiency and stability of the country's Chief Purchasing Tools.

Instability in sterling exchange is no doubt vexatious and troublesome to Government, and to the relative few engaged in foreign trade; but, provided it be not allowed to run to extremes, is not fatal, or even a very serious matter. The Exchange Banks will always, at a price, cover exchange risks. And the price is generally reasonable and very small.

(*c*) What are the effects of a rising and a falling rupee, and of a stability of a high or a low rupee on trade and industry, including agriculture, and on national finance? *Answer.*—An exhaustive reply to this question would mean a lengthy treatise!

Briefly, a rupee rising in general purchasing power (as evidenced by a general *fall* of prices) inflicts unexpected losses on all producers and stockholders; checks enterprises; numbs industry; and causes a general slowing down of economic effort. So far as sterling exchange is concerned, it temporarily checks exports and stimulates imports.

On the other hand, a rupee falling in general purchasing power (as evidenced by a general *rise* of prices) transfers unmerited profits to all producers, stockholders, merchants, middlemen, and speculators, and so stimulates all forms of productive and speculative activity at the expense of the great mass of fixed wage earners, pensioners, rentiers, and others who suffer unmerited and possibly cruel hardships. The fall in sterling exchange temporarily stimulates exports and checks imports.

A *stable* rupee, whether of high or low purchasing power, simply permits (*a*) *world* prices of products of which India enjoys a monopoly to adjust themselves to Indian costs of production, and (*b*) the *Indian* prices of products produced in other countries as well as India to adjust themselves to *world* levels. After the adjustment has taken place, there is no advantage to India either way—whether the rupee be of high or low value.

So far as National finance is concerned, as India has to purchase over £30,000,000 sterling annually to meet her sterling liabilities, it would appear at first thought that the greater the purchasing power of the rupee in relation to sterling (in other words, the higher the rate of sterling exchange), the better it should be for India. But this conclusion is subject to many qualifications and limitations. If, for example, this increased purchasing power be brought about by *world* conditions, including, possibly, a change in the value of gold, that have not caused a *corresponding* general fall of prices in India, then India gains for the time being, till further world adjustments in prices have taken place. The number of variations and combinations in local and world conditions is so great, that it is impossible in this place to discuss all possibilities that might result from such variations and combinations.

2. In relation to what standard, and at what rate should the rupee be stabilised, if at all? When should any decision as to stabilisation take effect? *Answer.*—The rupee—silver and paper—is such an efficient Monetary Tool so far as the great majority of India's vast population is concerned, that I cannot recommend its relegation to a secondary place in India's currency system in the present state of

the world's monetary affairs. If, however, it be thought necessary "in the interest of India" to attempt to stabilise the rupee in relation to some other currency, then the sovereign or the pound sterling would certainly be the best directions in which to turn.

Of these two, the sovereign would probably be the better. But if this were done, and Great Britain should find it impossible for any reason hereafter to maintain the pound sterling at par with the sovereign (sovereigns have not been in circulation in the United Kingdom for many years past), great confusion would arise, for we should probably see two exchange quotations for the rupee current every day—one for the pound (sterling), and another for the pound (gold). I would therefore urge extreme caution, and a deferring of the decision to attempt stabilisation with Great Britain's currency till we have had more experience of the European and American exchanges under the conditions amidst which we are now working.

3. If the rate selected differs materially from the present rate, how should transition be achieved? *Answer.*—If the rate selected were materially *lower* than that current at the time of selection, transition could only be effected by putting more currency into circulation, thus *raising* prices, checking exports, reducing overseas demands for rupees, and so lowering sterling exchange. I most strongly deprecate any such depreciation of India's Money Tools.

If the rate selected were materially *higher* than that current at the time of selection, then transition could be *expedited* by withholding issues of new currency, thus *lowering* prices, stimulating exports and checking imports, increasing overseas demands for Indian currency and the sterling cost of rupees. Such action must be even more strongly deprecated than a deliberate depreciation of the currency. See, however, para. (G) above.

4.—(*a*) What measures should be adopted to maintain the rupee at the rate selected? *Answer.*—Much the same as before the War, except that opportunities for remitting from and to India at definitely fixed rates should be increased; and, in view of present price levels, the Gold Standard Reserve enlarged.

(*b*) Should the Gold Exchange Standard system in force before the War be continued, and with what modifications, if any? *Answer.*—Yes, but with the following developments :—

(1) The Gold Standard Reserve to be increased to at least £50,000,000.

(2) "Reverse Councils" to be always "on tap" at the larger Branches of the Imperial Bank of India, at a fixed rate, and in sums of Rs. 10,000 and over.

(3) The Secretary of State's *Budget* requirements to be obtained through the Imperial Bank of India who would provide him with the necessary sterling, and recoup themselves by daily sales in London of Transfers on their leading Indian Branches, and daily purchases in India of sterling transfers on London, at rates fluctuating according to market requirements between maxima and minima fixed by Government. The Government of India to place the Imperial Bank of India in funds in India as required in connection with the Bank's sales of Transfers on its Indian offices.

(4) Demands by the public for remittances to India over and above those provided by the Imperial Bank of India in connection with the Secretary of State's Budget requirements, to be met from sales by auction in London of Currency Council Drafts on the Indian Treasuries at the chief Indian Ports. Currency Councils not to be available till the Imperial Bank of India had sold in London and bought in India sufficient Budget Transfers to meet the Secretary of State's Budget requirements for the year.

(5) Proceeds of *Currency* Council Drafts would ordinarily be devoted to the purchase in London and shipment to India of specie or bullion for enlarging the Indian currency, but might be retained temporarily in London in a Special Division of the Gold Standard Reserve, if Government, for any reason, did not consider it necessary to add immediately to the volume of the Indian currency in the ordinary way.

(*c*) What should be the size, composition, location, and employment of a Gold Standard Reserve? *Answer.*—At least £50,000,000, half in gold and half in sterling securities. The gold to be held in the Indian Treasuries and the securities by the Secretary of State in London. The Reserve to be employed to maintain sterling exchange at the minimum point agreed upon.

5.—(*a*) Who should be charged with the control of the note issue, and on what principles should control of management be transferred to the Imperial Bank of

India? What should be the general terms of transfer? *Answer.*—The Government of India. I am strongly opposed to any transfer of authority in the matters of manufacturing and issuing new currency from Government to any Bank. I consider the Bank of England system wholly unsuitable to India. The maintenance of the purchasing power of a country's Money Tools is one of the first duties of every Government, and the Government of India, perhaps more than most Governments, must carry out this duty with the utmost punctiliousness. The Government of India's Money Tools have always been, and must always continue to be, above reproach. Indian currency notes are growing in popularity daily—a development which Government should do everything to encourage.

So far as the month-to-month, day-to-day management of the currency issued by Government is concerned (including the provision of temporary supplies of Money Tools for the moving of the crops, &c.), the present arrangements with the Imperial Bank of India seem to me adequate.

(*b*) What provisions should be made as to the backing of the note issue? *Answer.*—The present arrangements appear to me adequate with the exception of Government's own Securities which are not an altogether satisfactory backing for Government notes.

In this connection I may mention that I see no good reason why Government should not issue special Service Notes as currency (e.g. notes backed by remunerative public works), *provided such Money Tools could be put into circulation without materially lowering the efficiency of the Tools already in use.* An appropriate time for such an issue would be when a tendency towards a general fall of prices was becoming manifest. From the revenues derived from the public work constructed by the aid of these special Money Tools, a Sinking Fund could be provided for the acquisition and withdrawal from circulation of the whole of the special issue in, say, 30 years.

The economies gained by the employment of capital on which no interest would have to be paid are obvious; and might enable much needed public works to be initiated the construction of which might otherwise be delayed.

(*c*) What should be the facilities for the encashment of notes?

(*d*) What should be the policy as to the issue of notes of small value? *Answers.*—The more the better. In the meantime, present arrangements seem satisfactory. I believe one-rupee notes to be costly to maintain and insanitary in use. Therefore I am against the issue of any note under five rupees.

6.—(*a*) What should be the policy as to the minting of gold in India and the use of gold as currency? *Answer.*—Having regard to the facts that the great dangers to India of the opening years of the present century no longer exist, that much uncertainty exists as to the future value of gold (most countries have now abandoned its use as currency, and employ it only as Reserve Money available for the adjustment of international balances), and that the chief countries of Europe—including Great Britain—are still only in process of a gradual and difficult recovery from the effects of the Great War, their financial and economic conditions still being very complicated, I no longer feel that it is urgently necessary "in the interest of India" that India should now have a gold currency. Gold Money Tools are an expensive luxury in these days of heavy national indebtedness, and I advise a waiting policy. India is doing very well indeed with her present Money Tools.

At the same time, I should be inclined to aim at the eventual establishment of a gold monetary system in India, the currency to include (*a*) gold-backed notes, (*b*) gold coins of large value only, say, Rs. 20 to Rs. 30 each, and (*c*) a large volume of subsidiary silver coinage legal tender for sums up to Rs. 100.

(*b*) Should the obligation be undertaken to give gold for rupees? *Answer.*—No, not until the Indian currency contained a large proportion of gold coins. But the Government must be prepared to sell "Reverse Councils" as suggested in my reply to question 4 (*b*).

7.—(*a*) By what method should the remittance operations of the Government of India be conducted?

(*b*) Should they be managed by the Imperial Bank? *Answer.*—See my replies to question 4 (*b*).

8.—(*a*) Are any, and if so what, measures desirable to secure greater elasticity in meeting seasonal demands for currency?

(*b*) Should any, and if so what, conditions be prescribed with regard to the issue of currency against hundis? *Answer.*—So far as I know, the present arrangements are working quite satisfactorily.

9. Should any change be made in existing methods for the purchase of silver? *Answer.*—Yes; the Government of India should call for tenders for such silver as it may require for currency purposes in Bombay as well as in London, and, in special cases, in any other part of the world that they may deem suitable.

I would here repeat that having regard to the uncertainty that dims the future of gold, of sterling exchange, and of the European and American exchanges generally, and also to (*b*) the general prosperity and very strong economic position of India as a whole, I see no reason why India should hasten, at this particular moment, to attempt to discard (and thereby discredit) her very efficient Silver Money Tools and substitute Gold Money Tools in their place, the more especially as the introduction of these new and expensive Gold Tools would necessitate the fixing of a ratio of exchange between the silver and the gold tools (or between the rupee and sterling) that might be very difficult to maintain *except by disregarding the efficiency of the Money Tools already everywhere in use by the great majority of the masses of India.* Therefore, I would urge the utmost caution. "Wait and see" should be our policy.

India as a whole appears to me to have arrived at a higher level of material prosperity, and with far larger accumulations of wealth than she has ever before enjoyed at any previous period of her history. There is no necessity to invite currency complications at this particular time.

APPENDIX 91.

Statement of evidence submitted by the East India Section of the London Chamber of Commerce.

(A) *A proposal to place Indian currency on a gold basis.*

1. The Executive Committee of the Section is impressed with the fact that there has not been time to readjust economic relations of the world, which were so violently disturbed by the Great War, and this may be seen by wide fluctuations in exchange values.

2. The effect of placing Indian currency on a gold basis, with gold coins as an internal medium of exchange, would involve a demand for gold which, in the opinion of the Executive Committee, would greatly exceed the estimate of £103,000,000 mentioned; an Indian gold currency would be used far beyond the borders of India, and gold coin would be likely to be hoarded in very much larger quantities than is gold bullion at present.

3. These considerations would, in normal times, render the establishment of a gold standard in India a daring experiment of the first magnitude. Under the present abnormal conditions, such an experiment would, in the opinion of the Executive Committee, be fraught with danger to India and to this country.

4. For these reasons, the Executive Committee is of opinion that the present is not an opportune time in which to introduce a gold currency in India.

(B) *A proposal to stabilise the rupee.*

5. If it were possible to stabilise the rupee as soon as it reached an exchange level which would in future be likely to represent normal, it would, in the opinion of the Executive Committee, be desirable to do so (the attempt to stabilise the rupee at 2*s.* must now be definitely regarded as having been a complete failure). At the same time the Executive Committee is not satisfied that it would be possible in all the circumstances surrounding the case to maintain the rate at 1*s.* 6*d.* In this connection it has to be borne in mind that for five years in succession there have been good monsoons. Should the favourable cycle be broken it may be found that the normal exchange value of the rupee will be nearer 1*s.* 4*d.* than 1*s.* 6*d.* In view, therefore, of the uncertainty as to whether the present rate can be regarded as normal, the Executive Committee recommends that stabilisation should not be undertaken until India has passed through a year of bad harvests.

6. Whilst it is true that a 1*s.* 6*d.* rate should, *primâ facie*, assist imports from this country into India, it must be remembered that that rate operates against the export of Indian produce, and so reduces the purchasing power of India.

APPENDIX 92.

Statement of evidence on the Indian Currency Problem, submitted by Professor Gustav Cassel.

I.—The General Background.

When the Commission asked me for my views on the question of the Indian Currency, the Commission presumably desired my opinion on the effects on the world's economy in general of a reform of the Indian currency and particularly of an eventual introduction of a gold standard with a gold circulation in India. This question is essentially that of how an increased monetary demand for gold on the part of India would affect the supply of gold at the disposal of the rest of the world and thereby the general level of prices in gold-standard countries.

In order to elucidate this question it is clearly necessary, first of all, to show how the general level of prices is affected by variations in the gold supply, and what the gold supply ought to be in order that the general level of gold prices should remain constant. In investigating this question we have necessarily to take account of the world's total supply of gold. In other words, we cannot be content with considering merely the stock of gold of a single country, nor, as is often assumed, the world's *monetary* stock of gold. Neither of these quantities has an independent existence. In a gold standard, gold is free to move between countries as well as between the monetary and the industrial stock of gold. This mobility of gold is a fundamental characteristic of the gold standard. We have, therefore, necessarily to find out how the general level of prices in a gold standard depends on the world's total supply of gold. An investigation into this question is contained in my "Theory of Social Economy," London, 1923, and the results are summed up in my "Fundamental Thoughts in Economics," London, 1925. I shall take the liberty in the following of quoting some passages from this summary.

The economic progress of the world must, of course, make an increased supply of gold necessary if the value of gold is to be invariable, i.e., if the general level of prices of commodities is to be constant. We cannot, therefore, speak of a superfluity or a scarcity of gold in any period without referring these conceptions to a supply which can be regarded as normal for that period. But what supply is normal? That is the equivalent of asking: What rate of increase in the world's gold supply has been necessary during a certain period to enable the general level of prices to remain constant during that period? Of course, this question can only be answered by experience, i.e., by collecting statistical material for a lengthy period. To this end, the period from 1850 to 1910 is particularly convenient, because the general level of gold prices in 1910 was practically the same as in 1850. In this period, however, the world's total stock of gold was multiplied by the figure 5·2, which corresponds to an annual increase of 2·8 per cent. If, therefore, the world's stock of gold had increased uniformly during the whole period by 2·8 per cent. every year, the stock in 1910 would have been precisely what it actually was, and there would have been no reason why the supply of gold should have caused any variation in the general level of prices in the meantime. Such a uniform growth of the world's stock of gold from 1850 to 1910, therefore, may be taken to represent the world's normal gold supply for every year of that period. The actual gold stock of the world was greater for a part of the period and smaller for the remainder, and we are in a position to give in precise figures a measure of the superfluity or scarcity of gold at any time of the period under consideration. For this purpose I have introduced the conception of a *relative gold supply*, which is for any given year the actual gold supply divided by the normal gold supply.

This relative gold supply is the only factor which can reasonably be assumed to have any influence on the general level of prices. The object of our investigation must, therefore, be to find out how far the actual variations of the general level of gold prices during the period from 1850 to 1910 are explained by corresponding variations in the relative gold supply. Thus we have to compare two curves, of which one represents the relative gold supply and the other the general level of gold prices. It is then immediately shown that the latter curve contains sharp short-time fluctuations which have no counterpart at all in the very even curve repreenting the relative gold supply. These price fluctuations are easily recognised as connected with periods of prosperity and depression. We can immediately draw the conclusion that trade cycles have nothing to do with the supply of gold. Eliminating the corresponding short-time price fluctuations

from the curve representing the general level of prices, we find a curve which corresponds to our curve of relative gold supply in a most striking manner. The conclusion is that the long-time variations of the general level of prices essentially depend upon variations in the relative gold supply.

According to these definitions a superfluity of gold was ruling in the 'fifties and the 'sixties of the nineteenth century, and the general level of prices rose correspondingly. This superfluity was diminished during the following decades, and by about 1887 the supply of gold as well as the general level of prices had again become normal. In the middle of the 'nineties a scarcity of gold prevailed and the general level of prices sank beneath the normal level. In 1910 the total supply of gold and the general level of prices were again normal. The rise of the general prices in the 'sixties and the fall of the general prices in the 'nineties were both greater than what would exactly have corresponded to the superfluity or scarcity of gold, and it may perhaps be inferred therefore that the movements of the general level of prices have a certain tendency to enlarge the influences of a superfluity or a scarcity of the supply of gold. If the world's total stock of gold is to increase by 2·8 per cent. per annum, the annual production must not only correspond to that factor, but must also make up for the year's definite loss of gold, which may be taken on an average to represent 0·2 per cent. of the total stock. Thus the annual production must amount to 3 per cent. of the total stock at the beginning of every year. Should the production exceed this amount of 3 per cent., the general level of prices must rise by the difference; again, should the production fall short of the said amount of 3 per cent., the general level of prices is bound to fall by the difference, e.g., if the world's production of gold in one year should only amount to 2 per cent. of the total stock at the beginning of that year, we have to expect a fall in the general level of prices of 1 per cent. Naturally, if the same shortness in the production of gold should prevail for a series of years, the fall in the general level of prices must continue at a rate of 1 per cent. per annum.

As the annual supply required for stability is a certain percentage of the stock accumulated, it must obviously grow at the same rate as the stock itself. This is a very important conclusion. Indeed, the consequence is that, if the production of gold, however abundant it may be at the present moment, should remain constant, it must become insufficient within a certain number of years. For the production increases the stock and when the stock grows, the annual increase of the stock which corresponds to the economic progress of the world must grow likewise, and sooner or later outgrow the constant production. If the annual production of gold falls short of the percentage of the accumulated stock required to meet economic progress, the general level of prices in a gold standard is bound to fall. If, therefore. the world should be confronted with the impossibility of increasing the annual gold production, and consequently with the necessity of being satisfied with a constant gold production—not to speak of the case of an actually diminishing production—the world would have to face a continual and incessant fall of the general level of prices with a consequent economic depression. Thus the gold standard must be said to be a satisfactory standard only on the condition that the world is able to increase indefinitely its annual production of gold at the same rate as characterises the worlds general economic progress.

My calculations show for the end of 1910 an accumulated stock of gold of £2,600 millions.* This stock had increased by the end of 1923 to £3,623 millions. The actual gold production amounted in 1924 to £79·4 millions, representing only 2·19 per cent. of the accumulated gold stock at the beginning of the year. Assuming that a yearly production of 3 per cent. of the accumulated stock still represents the normal requirement, we here find a deficiency of 0·81 per cent. In absolute terms the gold production ought to have been £108·7 millions. As it was only 79·4 millions there was a deficiency of £29·3 millions. In 1925, a production of 3 per cent. of the stock at the beginning of the year would have represented £110·9 millions. In reality it was only about £81 millions, and thus there was a deficiency of £29·9 millions, representing in percentage of the accumulated stock 0·81. It is worth noting that the absolute deficiency is increased and the relative deficiency is unaltered—in spite of a considerable increase in the production.

It is clearly seen from these figures that the present height of gold production is entirely insufficient for keeping up what we were accustomed before the War to regard as a normal economic progress requiring an annual gold production of

* The original calculations are in gold marks, and I have converted them here to pounds at the rate of 20 marks for £1.

3 per cent. of the accumulated stock. If this scarcity of the gold supply is not felt at present as a serious evil, this is only due to the fact that during the period from the beginning of the War to the end of 1924 America has accumulated quite an abnormal monetary reserve of gold. During the time of inflation gold was expelled from a number of European countries, and most of this gold was accumulated in the United States. The American authorities have taken the very sound view that this gold stock, in so far as it exceeds the normal requirements of the country, is to be regarded as held in trust for the rest of the world and particularly for European countries which may want to get the gold back again, as they gradually return to the gold standard. The American gold reserve has therefore not been used as a foundation for bank credit to such an extent as would correspond to usual traditions, the Federal Reserve system having seen its ratio of total reserves to deposit and note liabilities run up for some time to 80 per cent. and more.

People in Europe, however, have often taken quite an exaggerated view of the American superfluity of gold. It has been said that this superfluity would force America to a great inflation of her currency with the consequence of rising prices, and it has also been believed that Europe would run the great risk of being overflowed with American gold. On several occasions I have uttered warnings against such exaggerations and tried to make it clear, not only that there was no reason for assuming the growth of the American gold stock to be unlimited, but also that the part of this gold that could really be regarded as superfluous was no greater than would admit of its probably being absorbed in a comparatively short time. The actual course of events has confirmed this view. Towards the end of 1924 the gold stream took a new direction, and 1925 showed a net export of gold from the United States of 134·4 million dollars. True, this is not very much in comparison with the great accumulation of gold in the United States. But still it has proved enough to cause people in Europe to take a more reasonable view of the limits of the excess of gold in America and also to bring about a slight alteration in the American conception of the situation. In fact, there are several signs that go to show that people in the United States are no longer so eager to get rid of the superfluous gold, but are rather inclined to keep themselves ready to protect their gold reserve if it should be exposed to an increasing demand from abroad. This change of mind is natural enough. The merchandise trade balance of the United States is no longer so favourable as it used to be. From the figure of 981 million dollars for 1924, the excess of exports was reduced to 684·5 million dollars in 1925. The latter figure being much less than the foreign loans granted by the United States during the year, there is room for foreign demands for gold. Of course, America can easily protect herself against such demands by measures restricting her capital market. But such a policy would mean precisely that America would keep her gold stock for herself, with the result that her extraordinary reserve of gold would no longer be at the disposal for the rest of the world.

It is very instructive in this connection to read the National City Bank of New York's review of the gold situation of the United States (in their Report for February, 1926). The article referred to gives for the 1st July, 1925, the total of gold coin and bullion in the United States Treasury and Federal Reserve Banks at 3,962 million dollars, and the total of notes and deposit liabilities of all banks at 50,969 million dollars. From these figures the ratio of gold reserve to liabilities is calculated to be 7·7 per cent. For the end of 1924 the corresponding ratio of gold reserve to liabilities for Great Britain is calculated to be 6·5 per cent. The difference is small, and the higher gold cover of the United States is, according to the article, very well accounted for by the peculiarities of the American banking system. The important feature in this reasoning is the fact that leading people in America now think the time has come when the gold reserve of the country must be defended as not being superfluous.

Still, according to acknowledged standards, the gold reserve of the Federal Reserve system is doubtless somewhat higher than necessary. On the 30th December, 1925, the reserve ratio was 67·3 per cent., and thus, from the traditional point of view, there could be no reasonable objection to further gold exports. If we assume, however, that by such exports the reserve were to come down to 50 per cent., we may be sure that the Federal Reserve authorities would take strong measures to protect their reserves. Such a reduction in the reserve percentage must therefore be regarded as the maximum. In other words, of the 67·3 per cent., 17·3 per cent. could possibly be regarded as an excessive reserve. In absolute figures, the combined liabilities amounted on the said date to 4,192

million dollars. 17 3 per cent. of this sum is 725 million dollars. This is, therefore, the maximum amount to which we can reasonably estimate the excess stock of gold. According to the views now prevailing in America, the excess stock is doubtless much smaller, if it exists at all.

As now, the deficiency of the world's gold production according to the above calculations, amounts to about £30 millions, or nearly 146 million dollars, our calculated maximum excess stock of gold in the United States does not cover this deficiency for more than five years. Of course, objections may be raised against these figures. They cannot pretend to be exact. But they are built on the best material available and they give without doubt the essence of the whole problem of the world's gold supply as it presents itself for the time being.

Our result clearly shows that we are now rapidly approaching the time when the deficient gold production will make itself felt in an actual scarcity of the total gold supply of the world. Of course, we cannot know anything about the future development of gold production. But assuming the gold production to remain at its present height, the total stock of gold is bound to increase and then the annual production required for keeping up a certain economic progress must increase in the same proportion. With an unrestricted demand for gold, a growing scarcity of the metal with the consequence of incessantly falling prices is therefore inevitable, unless a very important increase in the world's gold production can be expected, or unless the world is going to acquiesce in a slower degree of economic progress than that which characterised the period 1850-1910. These are the fundamental features of the present gold situation.

Under such circumstances it is natural enough that every effort should be made to economise the use of gold. A prolonged period of falling prices without any prospect of a definite end would bring about a continued depression of the world's economic life, and must, therefore, be regarded as one of the most serious economic evils which could befall human society. A systematic economy in the use of gold is, however, practically possible only as far as concerns the monetary use of the metal. Since the very beginning of the after-war reconstruction I have regarded this economy in the monetary use of gold as an essential element in the whole work of reconstruction. This view has been shared by leading authorities. It found official expression first in the resolution of the Genoa Conference, which recommended that a certain economy in the use of gold should be aimed at by the concentration of the reserves of note-issuing banks. The extension of this economy to the use of gold as a circulating medium was at that time not possible to get incorporated in the resolutions. When, however, in April, 1925, Great Britain returned to the gold standard, the idea had ripened that, owing to the scarcity of the world's gold supply, it was necessary to refrain from bringing gold coins into circulation. Mr. Churchill's gold standard retained only the very kernel of the gold standard, viz., the maintaining of the currency within the neighbourhood of a constant parity with gold.

This is the model for the monetary system of the future. The programme should be : no gold in circulation and the greatest possible concentration of gold reserves, not only within every nation, but also internationally. This limitation of the demand for gold is to the common interest of all nations, inasmuch as everyone of them is interested in the highest possible stability of the purchasing power of its money and in preventing any growth of the real burden of its public debt.

What absolute purchasing power our money has is of course of no importance, the only relevant point being that the purchasing power is kept constant. As a matter of fact, the restoration of the gold standard as an international monetary system has been carried through at a price level—measured according to the index number of the Federal Reserve Board—of about 160 (corresponding to about 150 of the Bureau of Labour). Had the American price level fallen essentially below this point, it is extremely doubtful whether other nations would have found it possible to carry through the corresponding deflation and to restore the pre-war parity of their currencies. Now that this has been done in a series of cases, it is essential that the nations concerned should not be forced to a further deflation with all its pernicious consequences.

The question is simply this : will it be possible to keep the general level of prices at about the height denoted by the quoted index figures ? The answer is given by the above analysis. We shall have in all probability to face a growing scarcity of gold, a scarcity that can only be overcome by progressive reductions in the world's monetary demand for gold. All nations must co-operate in this policy. If any country chooses unnecessarily to increase its demand for gold,

we may be sure that other countries will answer by increasing their demands, or at least by measures calculated to protect their reserves, locking them up so as practically to withdraw them from the world's common fund of gold. With united efforts it seems fairly certain that we shall be able to prevent any considerable fall in the general level of prices for at least one or two decades.

What will happen thereafter it is of course impossible to tell. If the general progress of the world should require an annual addition to the gold stock far greater than the world's gold production can supply, and if we have exhausted all our gold economising devices, a continued and unlimited fall in the general level of prices will be inevitable. If the world then finds it necessary to avoid this calamity there will be no other alternative than to abolish the gold standard. Most people have hitherto regarded such a step as practically impossible, and certainly it would have been very unwise to try it under the conditions of extreme disorganisation and mistrust which prevailed after the war. But after a prolonged period of international co-operation towards stabilising the purchasing power of the world's currencies, the situation would be essentially altered. The very habit of deliberately regulating the value of gold by a systematic economy in the monetary use of the metal would be the best imaginable preparation for the future regulation of currencies without the use of gold. In stating this I do not overlook the difficulties. But in face of the great danger of a serious and progressive scarcity of gold the world would be forced to find a way out. Of course, the abandonment of the use of gold for monetary purposes would cause an enormous fall in the value of gold. All those interested in the value of gold, be it as producers or as possessors of gold funds, should observe that a policy preventing the value of gold from rising is from their point of view very much to be preferred to a development which would allow the value of gold to rise to such an extent that the world would be forced entirely to abandon gold for monetary purposes.

One might perhaps be inclined to believe that the world's annual monetary requirements of fresh gold might be diminished if the general level of prices were allowed to fall to a certain lower level. But this is not so. The annual need for gold, required for keeping the price-level constant, is independent of the actual level of prices and is exclusively determined by the rate of progress of the world's economic life multiplied by the accumulated stock of gold of the world. The world's annual need for gold would therefore be the same as it is now, even if there had been no rise of prices since 1913.

A rise in the general level of prices has, on the other hand, necessarily a restricting influence on the annual production of gold. If this influence has not hitherto made itself very keenly felt in the most important centre of gold production, South Africa, the explanation is only that the rise in prices of commodities in South Africa has been slower than in Europe and in America. If prices in South Africa were gradually to rise to a level with the world prices, a certain decrease in the South African gold production would necessarily follow and could only be balanced by progress in the gold-mining industry. People who are inclined to reckon upon an increase in the world's gold production from new discoveries of technical improvements should not quite lose sight of the counterbalancing influences of a probable rise in the cost of living at gold-mining centres.

II.—Criticism of the Proposal to Establish a Gold Standard in India.

A gold standard can take many different forms, and a criticism of the idea of introducing a gold standard in India will gain considerably in clearness and definiteness if it is referred to a particular scheme. It is, therefore, a great advantage that a "scheme for a gold standard for India" has been drawn up, and, as it has been communicated to me, I shall refer the following observations to this scheme.

Such a scheme must be judged in the first instance from the point of view of its effect on the scarcity of the world's gold supply, the significance of which has been set forth in the foregoing paragraph. It is necessary, therefore, to ascertain what extra gold requirements will be brought about by the establishment of a gold standard in India in accordance with the present scheme. An extra demand must, of course, arise first of all for currency purposes. This extra demand—the only one of which the scheme takes any notice—is calculated at 103 millions, and the scheme gives certain figures as to the distribution of this demand over the different stages which have been suggested for the gradual introduction of

the scheme. Having no particular knowledge of Indian conditions I take the statistical figures as they are presented. But with regard to the calculations based on these figures, I venture to offer the following remarks.

As the plan is to be carried through in 10 years, it is hardly satisfactory to calculate "the gold ultimately required for the reserve" on the basis of the present note circulation Rs. 189·5 crores. With the efforts now being made to develop not only the banking system of India, but also generally the economic life of the country, it must necessarily be expected that the note circulation will grow at a certain percentage per year. An estimate of this percentage should be an important element in the plan. Considering that the note circulation has grown from 66,12 lakhs in March, 1914, to 1,89,51 lakhs in September, 1925, it seems not unreasonable to assume that persistent and systematic efforts to further the use of bank notes would result in the doubling of the present note circulation within the proposed transition period of 10 years. The 30 per cent. gold reserve required according to the scheme would then, at the end of the period, represent not 56·9 crores, but 113·8 crores. Thus the total sum required for the currency reform would not be 137·2 crores, as given in the scheme, but 194·1 crores, i.e., £145·6 millions instead of £103 millions. But this is not all. If the law requires the Central Bank to keep normally a gold reserve of 30 per cent., the bank will, according to all experience, find it necessary to keep ordinarily a much larger reserve. Assuming that the bank, in order to be on the safe side, keeps a reserve of, say, 40 per cent., the need for gold for the reserve will ultimately amount to 151·6 crores, and the total sum of gold required for the monetary reform will be 231·9 crores, or £173·9 millions, instead of £103 millions. I quite realise that there may be reasons for assuming a slower growth of the note circulation, so I do not wish to press my figures, but put them forward only to draw attention to the considerable increase in the supposed gold demand which must be taken account of as probable.

With respect to the distribution of this demand over the transition period, the calculations are, as far as I can judge, untenable. It is said that in Stage I "comparatively few hoards would be large enough to buy the minimum quantity sold by the currency authorities." But if the bullion merchants step in as intermediaries, it is difficult to see why the size of individual hoards would be of any importance, the merchants always being able to present enough silver to buy the minimum quantity of gold. They would, therefore, not only "lay in stocks in anticipation of demand," but also immediately act as representatives of the hoarders. It seems very possible, therefore, that the first demand from these sources might considerably exceed the calculated sum of Rs. 50 crores. But I leave this point, and accept the given sum of 50 crores as good. Then it seems to me that the authorities must have that sum of gold at disposal in order to meet the first demand on the introduction stage. The idea that the sum required could be diminished by the 30 crores of gold in the note reserve seems to me incomprehensible. If a country wishes to establish a gold standard, it seems a very strange measure indeed to begin the operation by completely exhausting the gold reserve on which its note circulation is founded. Such a procedure would hardly strengthen the confidence in the new monetary standard. It seems certain, therefore, that the Rs. 30 crores gold in the note reserve would have to be left untouched, and that the assumed demand for Rs. 50 crores would have to be satisfied by gold acquired especially for the purpose. Further, according to the scheme, the minimum reserve to be allowed is 20 per cent. of the circulation. With the assumed initial note circulation this minimum would amount to 37·9 crores, which is about eight crores more than the existing reserve. It would then seem to be a necessary preliminary measure, before introducing Stage I, to increase the reserve by at least these eight crores. Thus the minimum sum of fresh gold required at the introduction of the scheme would be 58 crores or £43·5 millions. This is almost three times as much as the sum calculated in the scheme.

Thus we find that the gold requirements arising out of the proposed reform of the Indian currency are much higher, and much more concentrated within the initial period than has been assumed in the scheme. There is, however, room for another objection, which will perhaps turn out to be of still greater importance. The scheme has taken account only of the amount of gold needed for meeting monetary obligations. But in connection with the introduction of the gold standard and the demonetisation of silver we must expect a very considerable demand for gold to arise on the part of the hoarders of silver in forms other

than rupees. The demonetisation of silver will probably cause a sharp fall in the value of silver, and, in consequence, a distrust in silver as a suitable means of hoarding treasure. The effect on the demand for gold may be twofold.

Firstly, the present owners of metallic silver may be eager to exchange that metal for gold and throw large amounts of silver on the market in order to acquire gold. This would, of course, aggravate the fall in the value of silver, but would still represent a very considerable demand for gold. Naturally only one very conversant with Indian conditions can form any opinion of the probable size of this demand and of the way in which it will be distributed over the transition period. But *prima facie*, and to an outsider, it seems not unlikely that this demand may assume the same dimensions as the demand for an exchange of silver rupees calculated in the Scheme to represent Rs. 110 crores, or £82·5 millions.

Secondly, the very distrust in the stability of the value of silver may have this effect, that such future hoards as would under the old conditions have been accumulated in silver will instead be accumulated in gold. The average annual importation of silver into India for use in the arts, as ornaments, and for all purposes other than coinage, for the last five years is given at the figure of 81 million fine ozs., which, at the present price of about 30d. per standard ounce, would represent about £11 millions. If this treasure should in future be accumulated in gold instead of silver, an additional demand for gold of £11 millions per annum would arise. For the transition period alone that would mean £110 milions extra worth of gold. Of course, it is possible that the change in the habits of the hoarders would not be so radical, and that, when the value of silver had been stabilised at a lower level, the hoarders would again direct a considerable demand towards silver. But in the transition period, and particularly in the beginning of it, it seems probable that from this source would arise a very considerable extra demand for gold.

In addition, it seems necessary to take account of the increase in the general Asiatic demand for gold which will be a consequence of the introduction of a gold standard in India, with gold as circulating medium. With the intimate trade relations between India and the interior of Asia, it seems certain that gold coins circulating in India, and being generally used there as means of payment, would find their way in great quantities to other parts of the Asiatic continent, and that finally gold coins would become a general means of payment in Asia. In this case, the introduction of a gold circulation in India will have very far-reaching consequences on the world's demand for gold.

Summing up this discussion, we come to the result that the extra demand for gold caused by the proposed monetary reform could easily attain a figure several times higher than that assumed in the Scheme. It is, of course, impossible to give a reliable figure for this extra demand. For the sake of illustration I take it at £320 millions, corresponding to about four years' world production of gold. But an extra demand for gold of such dimensions could not but cause a most serious disturbance of the world's gold market and upset the whole policy of economising with gold outlined in the first paragraph. The direct fall of the general level of prices which would be caused by such an extra demand for gold would amount to nearly 9 per cent. But the ultimate effect on the price level would probably be far greater. I have aready observed above that the effects of scarcity or abundance of gold tend to be magnified in the movements of the price level. But in the present case the extra demand for gold would have much more far-reaching effects. It has been shown in the first paragraph that the world is already suffering from a considerable deficiency in the annual production of gold and that it will be possible to meet this deficiency only by systematic co-operation between all nations to bring about a strict economy in the use of gold for monetary purposes. It seems quite certain that the introduction a gold standard in India on the lines proposed in the Scheme, with the consequent extra demand for gold, would immediately cause any such co-operation to break down. It must be remembered that the extra demand for gold, amounting, on the above assumption, during the transition period of 10 years, to an annual average of £32 millions, would be added to the ordinary demand of India which, according to the average of the five years preceding the War, may be estimated at about £19 millions, but which since 1922, has reached very much higher figures. Taking the lower pre-war average we come to the result that the total Indian demand would amount to £51 millions, which is equal to nearly ⅔ of the world's total annual production. Doubtless every country would find itself obliged to protect its gold reserves from an Indian demand of such dimensions. The consequence would be that the different gold reserves of the world

would be locked up and debarred from being used as a common fund for the world's gold standard. In particular, it must be expected that the surplus of gold that now exists in the United States and upon which, as I have shown above, the world must reckon for meeting the imminent scarcity of gold, would no longer be available for such purposes. As soon as India had decided to establish a gold standard, people in the United States would immediately begin to find it necessary to protect the American gold reserve against Indian demands. Even if this protection were only to take the form of a more stringent monetary policy with higher rates of discount, it would have the effect of pressing down continually and progressively the general level of prices both in the United States and in other countries. Thus we should be faced with the calamity of falling prices and a consequent general depression of the world's economic life, from which we have sought to protect ourselves by aid of a rational monetary policy. For the carrying through of such a policy, based on a systematic economising in the use of gold, it seems to be a *conditio sine qua non* to prevent any great extra demand for gold from arising on the part of India. The conclusion is, therefore, that the suggested scheme for the introduction of the gold standard in India is absolutely opposed to the fundamental interests of the world's economy at large.

I wish to point out that in my opinion the results now described would be substantially the same, even if the extra demand for gold should turn out to be considerably lower than has here been assumed. Already, the large Indian demand for gold has a clearly depressing influence on the general level of prices in gold standards.

So far I have only discussed the proposed gold standard for India from the point of view of the economic interests of the world at large. Of course, India is a part of the commercial world and thus far has the same interest as all other countries in the stability of the general level of prices and in an uninterrupted development of production and trade. But the proposed introduction of a gold standard in India must also be judged with regard to its more immediate effects on India.

In the Scheme which has been submitted, an estimate has been made both of the permanent and of the initial costs connected with the introduction of the gold standard. According to what has been said above, this estimate must be considerably exceeded. But I am not in a position to form any exact idea of the sum to which the costs will actually amount.

The Scheme, however, has taken account only of the costs which would devolve upon the Government. But a correct judgment of the plan is possible only if due regard is also taken to the loss which the Indian people are bound to suffer in consequence of the artificial depression of the price of silver. The Scheme assumes a depression from the present price of over 30d. to about 24d. per standard oz., which means a reduction of 20 per cent. If the exchange of silver hoards for gold were to assume the greater proportions of which I have spoken above, it seems not improbable that the depression of the value of silver will go still further. But even a loss of 20 per cent. is serious enough, if account is taken of the whole mass of silver now hoarded in India. For a country which has for centuries accumulated treasure in the form of silver and now possesses such huge amounts of this metal, it must seem to be a rather strange policy deliberately to introduce such measures as are certain to depress the value of silver and thus to deprive the country of a considerable part of its accumulated wealth. This consideration must every day be a factor of practical importance for some holders who have to sell silver out of their hoards. It seems particularly odious to adopt a policy involving heavy losses to the poorer classes in whose hoards silver probably plays a preponderant part.

Under such circumstances it seems difficult to advocate the scheme of a gold standard on the ground of the general economic interests of India. If a gold standard is to be adopted, it must be shown that such a measure is of quite overwhelming importance from a monetary point of view. This of course involves a comparison between the proposed gold standard and the present monetary conditions. The following paragraph will be devoted to a discussion of this question.

III.—Recommendations.

When a radical change of the monetary system of a country is proposed, one must first of all ask whether the change is at all warranted, i.e., whether the existing conditions are so bad that a sound development on the basis of them is impossible. In the material submitted to me there is nothing to show that the

present monetary organisation of India really suffers from any such serious faults as would call for a radical change. In monetary matters a sound conservatism is always good policy. I, therefore, think that the first question to answer is this: Can a really good monetary system for India be constructed by preserving the essential features of the existing system and by introducing such minor modifications as may prove necessary?

In my opinion this is quite possible. The monetary system which India possessed from the time when the rupee had been stabilised at a gold value of 1*s*. 4*d*. up to the War must, on the whole, be said to have worked fairly well. Of course, the War brought about serious disturbances, and India, like all other countries, had to suffer from the general breakdown of the world's monetary machinery, which was a consequence of the War. But there are reasons to believe that the Indian currency suffered much less than most other currencies. In fact, the internal purchasing power of the rupee showed a remarkable stability. The violent fluctuations of the exchange were to a great extent an unavoidable consequence of the fluctuations in the value of the British currency and in the value of gold. Further, India comparatively soon overcame these difficulties, and the rupee attained a fairly stable gold value at about the same time as the pound sterling was restored to its gold parity.

The aim of the Indian monetary policy must, therefore, in my opinion, be to stabilise the exchange value of the rupee in terms of gold. The choice of the rate of stabilisation being naturally of the utmost importance for the success of the stabilisation policy, great care should be taken in ascertaining what rate of exchange corresponds most truly to the present conditions. It may, perhaps, be said that the relative prices of different groups of commodities and of labour have not yet attained the necessary equilibrium to offer a reliable basis for a stable purchasing power parity of the rupee. On the other hand, it is not advisable any longer to postpone the definite fixing of the gold value of the rupee. A stable currency will certainly contribute very much towards stabilising the internal economic conditions of the country. Whether the present price of the rupee at about 1*s*. 6*d*. is an accurate expression for the internal purchasing power of the rupee in comparison with that of the British currency is a difficult question, and I have not the intimate knowledge of Indian conditions necessary to form an opinion on this subject. But the fact that it has been possible for a considerable period to keep the value of the rupee in the neighbourhood of 1*s*. 6*d*. seems to speak for the probability that it will prove possible to maintain this external value for the future without having recourse to any measures which would mean a deliberate alteration of the internal purchasing power of the rupee.

The idea that the rupee must necessarily be restored to the pre-War gold parity of 1*s*. 4*d*. has a striking resemblance to the programme of raising depreciated currencies to their pre-War parity, which has played such an unfortunate rôle in the recent monetary policy of many European countries. If no better reason can be given for choosing 1*s*. 4*d*. as the value at which the rupee should be stabilised, the idea ought to be abandoned, and the sooner the better. If on closer investigation it is shown that the present purchasing power parity of the rupee lies in the neighbourhood of 1*s*. 6*d*. a lowering of the value of the rupee from 1*s*. 6*d*. to 1*s*. 4*d*. means a process of inflation which is just as harmful as the deflation which in some European countries would be required in order to raise the value of the currency to a higher pre-War level. The leading principle must be to stabilise every currency at its present value. Where there is some uncertainty with regard to this value, where, for instance, there is a difference between the external and the internal value, we have to choose such a stabilisation rate as will cause the least possible disturbance.

The stabilisation of an abstract unit of value at a fixed gold parity is a programme the practical possibility of which is proved by long experience. In fact, the pre-War rupee was for many years kept in a stable relation to the British currency, and after the War it has proved possible to stabilise even the most ruined paper currencies at a certain gold value. The failure of the recommendations of the Babington-Smith Committee should not be taken as a proof of any insuperable difficulty in the problem. In 1919 an effort to give the rupee a fixed gold value was absolutely premature. The value of gold itself was then subject to the most violent variations that have occurred in historic times, and the conditions of international trade were still extremely unstable. In these respects the present situation is radically different. Since the great deflation in 1920-21 the value

of gold from the middle of 1922 has attained a remarkable stability. The British currency has been restored to its gold parity, and the commercial world, with minor exceptions, has settled down to work on a gold standard basis. At the same time, in spite of all hindrances, international trade is returning once more to fairly regular conditions, at least in regard to its means of payment and of their general purchasing power. Under such circumstances it must be said that the time is now ripe for fixing the gold value of the rupee at the level at which it has already begun to stabilise itself. The only real danger which from the side of gold could threaten such a stabilisation as the scheme for introducing a gold standard in India which has been criticised above. Such a policy would undoubtedly expose the value of gold to serious and almost incalculable alterations, and would, therefore, make the maintenance of a fixed gold value of the rupee both a difficult and dangerous undertaking.

There seems to be no doubt that the rate of stabilisation chosen by the Babington-Smith Committee, viz.—2s. gold for the rupee, meant a very considerable over-valuation of the rupee in comparison with its purchasing power parity with gold at that time. But any attempt to maintain a much higher exchange value for a currency than corresponds to its internal purchasing power is inevitably doomed to failure, particularly if it is not backed by the most severe measures to contract the currency and thus to increase its internal purchasing power. An artificially high exchange value can only result in the balance of trade being turned against the country. This was precisely what happened in India. Here again the inevitable failure of the Babington-Smith experiment should not be allowed to discredit a rational policy aiming at the stabilisation of the rupee at a value truly corresponding to its actual purchasing power. The Babington-Smith stabilisation policy was also so far premature that India had not yet at that time a central bank entrusted with the power to regulate the whole currency of the country.

A gold standard is in its essence an abstract standard where the price of gold has been fixed, not absolutely, but so far that variations of the price are restricted within very narrow limits. This is the same as to say that the unit of the currency has an approximately fixed gold value. The fact that the unit of the currency is in such a way connected with gold is what essentially characterises the gold standard. All other traditional attributes of the gold standard are of entirely subordinate importance. After the great revolution in the world's monetary system, the fixed gold parity stands out more clearly than ever as the only lasting and necessary feature of the gold standard. The new British currency system is an expression for that purification of the conception of the gold standard which has now taken place. According to this view, a rupee stabilised at the value of 1s. 6d. is essentially a gold standard. To combine the introduction of such a gold standard with a series of measures of a merely conventional character is, in fact, to go back to the ideas of the gold standard which prevailed in the monetary reforms of the 'seventies of the last century.

Among unnecessary accessories of the gold standard is particularly to be reckoned the introduction of gold coins in the circulation. Sweden has never allowed herself such a luxury and still has always been able to maintain her gold standard in a very satisfactory state, except for the period of War disturbances. India ought to refrain from the use of gold as a circulating medium not only because it is too expensive, but also because an Indian demand for gold for that purpose would, as explained above, mean an intolerable aggravation of the scarcity of gold for the world at large.

Another measure prescribed by the traditional etiquette of the gold standard is the abolition of the full legal tender character of silver coins. It is difficult to tell what practical purpose this measure would serve. The theoretical motive is of course that silver coins, the metallic value of which is considerably less than their face value should not be recognized as means of payment to unlimited amounts. But bank notes have no intrinsic value at all and still usually possess the quality of unlimited legal tender. As long as a currency is kept in a definite parity with gold it is obviously of quite secondary importance what means of payment are used. What are the real drawbacks of using silver? It is true that if the value of silver should fall, the silver coins would have a reduced intrinsic value. But this is quite irrelevant, as they are not taken for their metallic content, but as representatives of the rupee. Again, if the value of silver should rise, this movement is equally irrelevant as long as the silver value of the rupee does not exceed its fixed external value. In the latter case, some inconveniences would be caused by the disappearance of silver coins from circulation. But such

an event is not very probable. The fact that it has happened in a period when the value of gold was extraordinarily depressed and the internal purchasing power of the pound sterling was still more reduced, does not make the return of such an event more probable.* As has been explained above, gold is most likely to rise in value in future, and therefore the metallic value of the silver rupee in terms of gold is more likely to fall beneath the present level of slightly more than 11d. than to rise above it. If the rupee is stabilised at a gold value of 18*d*., the margin for a possible rise in the price of silver seems to be broad enough. It is therefore quite unnecessary for India in any way to alter the legal tender capacity of the silver coins. The most important interest of India in this respect is *not* to depress the value of silver by quite unnecessary measures tending to a further demonetisation of silver.

Thus there is no need for radical alterations in existing conditions. India can have a stabilised standard on a gold basis without much fresh legislation, merely by a rational development of its present monetary system. The value of the rupee should be kept in a constant relation to that of gold, the parity being, say, 1s. 6d. gold, and only very small variations over and beneath this parity being allowed. The circulation should consist of silver rupees and of bank notes, both having the character of unlimited legal tender. The value of the rupee should be secured fundamentally by a sufficient limitation in the supply of these means of payment. This supply should in its entirety be regulated by the central bank, and fresh means of payment, whether in the form of notes or silver rupees should be put into the hands of the public exclusively in the form of advances by the Central Bank. From the present point of view, there is no difference between silver coins and bank notes, and therefore no dualism in the conditions under which they are supplied to the public can be justified. Particularly it is of primary importance that the Government should be excluded from any possibility of increasing the circulation by issuing means of payment to the public, whether in the form of notes or rupees, printed or coined for the purpose. Government finance must not depend on any such means for creating purchasing power.

Of course, it is an advantage for India to make the fullest possible use of bank notes in her circulation. To this end the system of banking should be methodically extended over the whole country, and people should be encouraged to keep their private reserves in banks or in saving certificates or other investments. When this becomes a general custom people will find it quite natural to use bank notes for their payments. In this way, if at all, it will be possible to combat the habit of hoarding, which is, perhaps, the most important cause of the poverty of the Indian people and the greatest hindrance to a strong economic development of the country. The agricultural population of India ought, of course, to use their savings primarily for the direct improvement of agriculture, and every facility should be given to supply the Indian peasant with the necessary credits for improvements beyond the limits of his personal savings. If this were done the need for hoarding would be very much reduced, and India could use her present export surplus to buy agricultural machinery and implements, iron and steel and such things, instead of unnecessary precious metals. In fact, the Royal Commission on Indian Agriculture seems to be the body which can do most to rationalise the habits of the Indian people with regard to the use of currency.

If the note circulation is to play a preponderant part in the Indian monetary system, it is natural that the regulations with regard to the reserve for this note circulation should require close attention. However, first of all it is necessary to make clear what is the purpose of the reserve. The old idea that the reserve in some mysterious way supports the circulation, or is a foundation of its value, has to be abandoned. No reserve can give a currency a higher value than it has on the basis of a distinct scarcity in the supply of means of payment. The function of the reserve as regards the value of the currency can only be to prevent the small fluctuations in the exchange which can take place even when the internal purchasing power of the currency is kept at its right value. For this purpose the reserve must be able to furnish such amounts of foreign currency as may be demanded at any moment. Further, the reserve has, of course, to supply the people with the silver coins that may be requird.

* Even the high price of 78*d*. per standard ounce which was attained on the 17th of December, 1919, and which made such an impression on the Babington-Smith Committee corresponded only to the general rise of British commodity prices, *i.e.* to the depreciation of sterling in terms of commodities. Reckoned in commodities the value of silver was at that time by no means extraordinarily high.

The reserve must protect the silver circulation as well as the note circulation. There can be no line of demarcation between these two functions. Therefore, there should be only *one* reserve. This common reserve should, as said before, contain a certain amount of silver rupees in order that the notes should always be convertible into coins. It is an open question whether the Bank of India should be obliged to sell gold in bars at a fixed maximum price. If this is regarded as desirable the reserve ought to contain a suitable amount of gold in bars held in India. It is not necessary that this amount should be very large. For if any demand for gold should appear it would always be possible within a short time to increase the gold holdings in India by importation.

For the rest, the common reserve would only have the function of guaranteeing that exchange could always be sold at a price in the neighbourhood of the fixed par of the rupee. For this purpose it is convenient to have reserves in those foreign financial centres on which the demand for exchange usually preponderates. For India, by far the most important external financial centre is, of course, London, and it is, therefore, quite natural that the reserve, which has to guarantee the external stability of the Indian currency, should to a great extent be kept in London. However, it seems natural to keep a part of the reserve in New York, and, on the whole, it seems to me that the authorities of the Bank of India ought to have some discretion in the choice of the location of the reserve.

Once the purpose of the reserve is made clear, it is not necessary to say much about the composition of the reserve. There is obviously no reason for laying up a huge store of metallic gold. Except for the limited amount that would be required in India for selling gold bars at demand, there would be no need for gold in the reserve. The foreign assets, which should be at immediate disposal for meeting exchange demands, could most conveniently consist of deposits with banks in London and other financial centres. The traditional metallic fund, which is never to be touched, seems to be a rather senseless idol, too costly to be worshipped by a modern people.

The most natural cover for bank notes or silver coins in the circulation is without doubt regular trade bills with short maturity, serving as a self-liquidating asset. Indian domestic bills of this description should naturally form an essential part of the cover kept against the circulation. Another part of the reserve could conveniently consist of general trade bills in sterling and dollars, held in India or abroad. There seems to be no sufficient foundation for the idea that a part of the reserve ought necessarily to be invested in Government securities. If these securities are those of the country itself the system involves obvious dangers, and should in principle be abandoned. However, a concession to the existing conditions can be made in so far as a strictly limited amount of Indian Government securities may be allowed to form part of the reserve. To the practice of investing part of the reserve in securities of other Governments within the British Empire there are not the same objections, provided only short-term maturities are selected.

Finally I desire to emphasize the importance of making the Central Bank absolutely independent of the financial interests of the Government. There must be a clear distinction between the functions of the Treasury and the functions of the Bank. The Government should meet its expenses from taxes and other sources of real income, or from genuine loans from the public, but should have no opportunity of creating fresh means of payment for the purpose. The Government should also in the ordinary way of business buy from the Bank such amounts of sterling exchange as they may require from time to time for payments in London. If it is considered necessary that the Bank should extend credits to the Government, there should be a narrow and definite limit to such credits.

When the whole circulation is regulated by the Bank and fresh means of payment are only issued as advances of the Bank, the circulation will attain its proper elasticity. On the one hand, trade's extraordinary need for currency will be satisfied by seasonal extensions of the Bank's advances, and on the other hand, a superfluous currency will be contracted in a natural and smooth way by the repayment of such advances. Under such conditions a wise bank policy will be able to prevent any depreciation of the Indian money, and the fiduciary character of the currency will in no way impair the stability of its value.

APPENDIX 93.

Letter dated 30th April 1926, from Mr. J. Pierpont Morgan, of New York, to the Secretaries to the Royal Commission on Indian Currency and Finance.

I have received your letter of 20th April containing the questionnaire entitled "Proposed questions to be asked the American witnesses by the Chairman of the Royal Commission on Indian Currency and Finance," and, "Particulars of a scheme for a Gold Currency for India, which has been suggested to the Commission in evidence," which I have read with great interest.

I regret that it is not possible for me to be in London before the end of the summer, so that I cannot appear in person before the Commission. Furthermore, as I am not an economist or a statistician, but only a practical banker, I do not feel that I could attempt to answer all the very interesting and important questions included in the questionnaire; but the questionnaire itself, and the proposed plan, give rise, in my mind, to very serious question as to the possibility of a successful working out of a plan of this vast proportion and importance without more accurate knowledge of the effort required to produce the final result than would seem to be obtainable even by the best statisticians.

Putting the general matter on one side, however, and coming to concrete comment, I would suggest that the proposal would be generally understood as tending to decrease the value of silver and its buying power over commodities; and, as India is the largest owner of silver already produced, and America is the largest producer of silver in the world, it would seem that both India and America would look with great concern upon a step which would tend to depreciate the value of silver.

I would refer to the fact that after the Franco-German War of 1870, when Germany demonetised its silver and established a gold currency, there was a long period of world-wide liquidation which enhanced the value of gold, or, in other words, caused a fall of prices everywhere, and lowered the value of silver.

The foregoing doubts would naturally be present in the minds of well-informed people in this country and would, therefore, have an important bearing on the single question which I feel competent to answer. This question is B, No. 9, which reads as follows :—

> "Would a proposal by the Government of India to obtain such credits in New York for the purpose of carrying out the scheme referred to (for putting gold into circulation in India, concurrently with the sale of silver) be likely to encounter any such difficulty as would make it undesirable to contemplate that step?"

In answering this question I may say that—

(1) as I believe the expectation of the enhanced and accelerated demand for gold in India will have a general deflationary influence and embarrass monetary reconstruction in Europe, and

(2) as it is certain that the sales of silver by the Indian Government will have a serious effect on the price of that metal, of which America is the largest producer, and, inversely, upon other metals of which silver is a by-product, and

(3) since it seems doubtful that the Indian Government can measure with exactness either the total amount of gold which would be needed to carry out this plan, or the rapidity with which the gold would be used, and there would, therefore, be a corresponding degree of uncertainty as to the amount of credit required in the United States and the rate at which the gold would be withdrawn from that market,

it is my definite opinion that the proposal of such credits would encounter such serious opposition in the United States as would certainly make it extremely difficult and probably even impossible to give India any assurance that she could float the necessary loans or obtain the necessary credits in this country.

I sincerely hope that the foregoing observations may be of some assistance to the Commission in connection with the important inquiries that it has in hand.

APPENDIX 94.

Statement of evidence submitted by Mr. Jas. S. Alexander, Chairman of the National Bank of Commerce in New York.

There is presented to me for consideration two documents: a project which has been presented to the Commission and a questionnaire prepared by the Commission designed to bring to light the probable effect of the adoption of the project. The project as outlined suggests problems of extraordinary complexity. Because of this complexity and because of the lack of necessary basic data, it is impossible to approximate an accurate estimate of the probable effect of its adoption. It possesses, however, some highly important potentialities which may profitably be discussed.

The Commission has asked me to answer a series of questions based upon the outline of the project, and to aid in the discussion of the questions has made assumptions as to the volume of gold required to carry out the project.

The assumptions give a somewhat more definite basis for discussion, but this basis is necessarily hypothetical. To answer the questions upon the basis of these assumptions would be to give a series of answers that might leave out important points upon which the effect of the adoption of the project might turn.

There is another reason why it is impossible to give satisfactory answers to most of these questions. Many of the important questions are so inter-related that before a definite answer can be given to any one, we must have answered the others. For example, the answer to the question as to American banking attitude would depend upon the probable effect of the project upon both American and European credit conditions, which would depend upon international fund movements, which would depend partly upon European currency conditions, which would depend upon the effect of the Indian demand upon the reserves of Great Britain and continental countries, which would depend upon the use which India would make of its reserves in London and upon the other means which India would resort to to obtain additional gold, which would depend upon the Indian demand for gold under the new scheme—all of which, it appears, would depend to no small extent upon the indefinite and intangible factor of Indian psychology operating under a new condition with respect to the use of gold. Moreover, at every point in this sequence of dependencies there are other uncertain points which might alter the trend of events at any succeeding point.

When we consider any of the other important questions, such as the cost of the project to India, direct and indirect, the effect of the project upon the silver market, upon the stability of the gold standard, upon the gold price level and upon wages, standards of living, &c., we are confronted with a similar series of sequences at points in each of which are to be found other uncertain and immeasurable factors.

Notwithstanding the uncertainty as to the result of the adoption of the project, there is clearly inherent in it potentialities of great importance to India and to the rest of the world, and it is practicable to point out some of the possible consequences of the adoption of the project.

The Commission's questions all point to six general lines of inquiry :—

(1) the effect of the adoption of the project directly upon the stability of the currency of leading nations;
(2) the effect of the adoption upon the gold standard throughout the world and upon the value of gold, and, therefore, upon the trend of price levels, trend of wages, &c.;
(3) the effect upon the silver market and upon the silver and allied industries and possible repercussions upon other industries;
(4) the effect upon India particularly—the cost of the project and the reactions of consequent world readjustments upon India;
(5) the effect upon credit conditions in the United States and in other leading countries and the attitude of these countries toward loans to India;
(6) the advisability of selecting the present as the time for entering upon the project.

In approaching any of these lines of inquiry, it at once becomes clear that, before a conclusion can be formulated, one must have a definite notion as to three main points necessarily involved in the plan, namely :—

(1) the volume of gold which India would absorb under the new scheme;
(2) the sources whence this gold would be drawn;
(3) the means taken to acquire this gold.

In view of the mal-distribution of gold occasioned by the war and post-war period, and particularly the large gold reserves lying in the Federal Reserve vaults, we in America have looked with favour upon developments calculated to assist other nations to return to the gold standard and to bring about a more nearly normal distribution of gold. Having in mind the habits of most countries with respect to gold and the present tendency in many countries to economise in the use of gold, we have felt that the withdrawal of gold from the United States would not occur in such volume at any one time as to cause serious disturbance in this country. In general, our attitude is one of close sympathy with the plans of any nation directed toward the restoration of the gold standard. As soon as we approach the larger aspects of the present Indian project, however, we are confronted with the fact that this project, because of its tremendous potentialities, constitutes a problem entirely different from any of the gold standard problems raised in Europe, or, indeed, in other parts of the world.

The first line of inquiry, as indicated above, is the amount of gold which India would require for carrying out the project and for maintaining it. India has tremendous hoards of gold—clearly an amount in excess of that which would be required in America or Europe to sustain under a complete gold standard a volume of business equal to that of India's. If it were possible for India to mobilise the gold now in the country and to utilise it for monetary purposes along lines similar to those of America or European countries, it would not be necessary for India to call upon the outside world for gold in addition to normal requirements. In this event, it is conceivable that India could adopt the gold standard without causing a serious disturbance of the value of gold or of the currency and trade conditions in other countries.

Whether such an accomplishment is at all within the range of possibilities is a question which certainly no one, not having had long intimate contact with Indian life, can answer. Such information as has been given by authorities on Indian currency and by foreigners who have had long experience in India raises grave doubt as to the possibility of such an accomplishment.

That there is some doubt on this point in the Commission's mind is evidenced by the assumptions in the questionnaire that the project would "involve the absorption by India of about £103,000,000 of gold (in addition to normal requirements for arts, hoards, &c."), of which it is assumed that £50,000,000 would be required within a year. Whether the carrying out of the project would require this amount or much less or indeed very much more, and whether the sustaining of the plan once it was initiated would require a much more rapid accumulation of gold than that suggested, depends so much more upon the unknown factor of the Indian psychology that it seems that no opinion could be of very great value.

If, however, we assume, as the Commission has requested, that the possible additional absorption of gold could be limited to the amount suggested in the questionnaire, we have a basis for discussion, albeit hypothetical. We should bear in mind that from the purely quantitative aspect the importance of such absorption of gold would depend upon the amount of gold still to be required by Europe before the programs for stabilisation now under way could be carried forward to completion. It should be borne in mind that of the 25 countries of Europe, only about one-half are upon any form of gold basis, and that among the nations comprising this one-half are several whose complete programs have not yet been carried out and some whose economic and financial conditions are such that in the case of any considerable shock the continued stability of the currency could not assuredly be maintained.

Just how much more gold European nations will require when the final stabilisation plans have been completed, it is now impossible to say. The uncertainty existing as to the policy which numerous European nations will find it necessary to follow with respect to the substitution of foreign exchange holdings for gold, together with the impossibility of knowing to what extent European peoples will return to hand-to-hand circulation of gold—these uncertainties render it impossible to estimate the probable European demand for gold.

Owing to the strength of the American gold reserves, it would be practicable, if carried out gradually, for America to part with 500 million dollars of gold, providing the prospective European demand remained within the limitations now in sight.

In this connection, however, we should not forget the extraordinary absorption by India during the last three years. Before the war India normally absorbed between 10 and 20 per cent. of the world's annual production. Within the last three years she

has absorbed an average of about half of the world's production. It seems improbable that such an absorption of gold as that recently occurring in India, in the light of the reduced world output of gold as compared with that of the pre-war, could have been possible had European nations returned to a normal gold basis without occasioning an extreme shortage of gold and affecting world price levels.

If India could restrict her ordinary absorption of gold to the average proportions before the war, and if European nations, through economies in the use of gold, could return to the gold standard by the use of a relatively less amount of gold than before the war, then it is conceivable that India, by utilising part of her recent excess importations and perhaps some moderate excess importations in the future, might adopt the gold standard without impeding European recovery and without disturbing world price levels. This conclusion, however, rests upon two debatable assumptions, namely, a restricted use of gold in Europe, and, second, the return of India to ordinary gold requirements for her ordinary purposes. Notwithstanding the explanations which have been given for the recent extraordinary absorption of gold by India, it would appear that India's future demand for gold for so-called normal purposes must remain uncertain. In summary, the answer to one of the most fundamental questions, namely, the amount of gold which India would absorb, must be that clearly we cannot know in advance.

From the point of view of the effect of the Indian project upon the stability of European currencies and upon the trend of trade, and from that of possible repercussions upon India and the United States, the factor which is at this time fully as important as the amount of gold to be absorbed by India is the sources from which India would withdraw this gold.

If the gold absorption by India could be limited to the amounts suggested in the questionnaire, and if the gold could be withdrawn from America in such a way as not to curtail American credit extensions to Europe, the transfer might be made without any considerable disturbance to world currency conditions. However, it is not at all clear just how this could be done. Inasmuch as there exists no excess reserves in the commercial banking system of America, the excess gold all being lodged with the Federal Reserve system, and inasmuch as short of a direct gold loan by the Federal Reserve Banks to India (a project that appears highly improbable) there is no means whereby the gold can be shipped from America without causing a contraction of credit in this country amounting to anywhere from 2½ to 10 times the amount of the gold shipped out, it is highly unlikely that any considerable amount of gold could be shipped from this country without causing a contraction of American credits to Europe unless the Federal Reserve system should see fit to place additional credit in the market by buying securities or to establish such rates concerning rediscounts as to render it profitable for American banks to increase their indebtedness to the Federal Reserve system and thus to rely upon additional borrowings from the Federal Reserve system to replenish losses incident to the outflow of gold.

It is impossible for an individual banker or a group of bankers to forecast what Federal Reserve policy in this respect might be. In view of the high degree of uncertainty existing in the Indian proposal and the possibilities for unfavourable repercussions upon European and American business and finance, it is difficult to see how the Federal Reserve banks could co-operate in the carrying out of this plan. In the event that the plan were initiated and the stability of European credit conditions threatened, it might be necessary for the Reserve system to support the European situation. There might, however, develop limits to which the Reserve system could co-operate if the European situation became too serious. If the Federal Reserve system did not make a direct loan to India, or by open market operations or favourable discount rates did not make it possible to offset credit restrictions incident to outgoing gold, then there would occur a contraction of credits to Europe. Whether the gold were drawn from New York under these conditions, therefore, or whether it were withdrawn directly from Europe, the chief burden of the gold drain to India would appear to rest principally upon Great Britain in the first instance and probably to some extent, possibly to a considerable extent, upon several continental countries in the second instance.

And this brings me to what appears to my mind to be the most important aspect of this whole project, namely, the far-reaching possibilities of a present drain upon the gold reserves of Europe. After 10 years of chaos in the currency of many of the principal countries of the world we are only just now getting back to a

measurable degree of stability. As previously indicated, some of the countries which have recently attained stability are still in the convalescent stage, and no one can now forecast how much of a new shock could be withstood. Numerous other countries are still struggling with the problem of stability, and their ability to attain stability is clearly conditioned upon the maintenance of recently attained stability in other countries.

In Great Britain the favourable balance of payments has continuously declined in the last several years, and while it is probable that Great Britain still has a modest favourable balance of payments, the trend of the trade balance raises apprehension as to the future. Germany is still going through a process of rigorous readjustment. In Italy the currency is not yet stabilised, and the recent adverse movement of trade leaves a measure of uncertainty. The present distressing situation in both France and Belgium needs no comment. Poland has once more slipped back into the condition of marked instability. Norway and Denmark have recently made considerable progress, but the final stability of the currency has not yet been attained in either country. In both Austria and Hungary the outlook appears to be favourable, providing no untoward event occurs which might shake confidence in the general European situation, and lead to an attempt of foreign banks to withdraw credits extended to these countries. It is agreed in both of these countries that any such attempt might cause serious embarrassment. Several small countries, including Switzerland, Holland, Sweden and Finland, appear to be firmly established upon the gold basis, but it would be difficult to forecast how well even these countries could withstand the reactions from a severe strain placed upon other continental countries.

It is impossible to forecast to what extent a serious drain upon London would result in a drain of English funds from the Continent and thus in a movement on the part of continental countries to prevent the outflow of their reserves. Again, the possible repercussion of such a movement upon the credit of Europe in America, and upon the trade movements of Europe and of the world, cannot be approximated. And this suggests what I conceive to be the most dangerous aspect of seriously considering the adoption of the Indian project at this time, namely, the high degree of uncertainty which it injects into the whole European situation. It is this element of uncertainty which, more than anything else, might serve to destroy the reviving confidence in Europe.

The third consideration that goes to the root of some of the questions listed in the questionnaire is the means to be taken to acquire this gold. If we assume that the gold required for the scheme will be in excess of that which would be imported and paid for in the usual way by the favourable annual balance on international account, there appears three theoretical ways that this gold could be secured :—

(1) By a loan from the Federal Reserve banks.

(2) By a private loan in Great Britain or in the United States.

(3) By utilising present Indian assets, including Indian reserves in London, and the Indian silver holdings.

As already indicated, it may be assumed, I should think, that the Federal Reserve banks could not consider a loan to India for this purpose—certainly not at this time, and not until the project could be modified in such a way as to give definite assurance of no untoward effects upon business and finance in America and in Europe.

Concerning the second suggestion, much the same should be said. American banks could not advance money for a project that threatened to bring disturbance to American business, nor could they be expected to recommend such a loan to the American investing public. For somewhat analogous reasons it would seem unlikely that the British or continental banks or investors would at this time seriously consider a loan for this purpose.

India would, I think, find it necessary to rely upon sources within her own domains or upon balances she possesses or might accumulate abroad. How far India could embark upon the project by the aid of balances now held abroad it is impossible to say, but if the project proved to be disturbing to world currency and trade conditions, the resulting depression in other countries might be so reflected upon Indian trade as to prevent her accumulation of additional balances abroad with which to purchase the additional gold needed to support the project.

There remains one important means, namely, the sale of a large part of India's silver holdings in the world's markets. It is suggested by the memorandum that such sale as is proposed might cause the decline of silver to 24*d*. There are so many factors of uncertainty in the project that it would appear that any estimate as to the level that the price of silver would reach before it could be stabilised must at this time, or until the project was well under way, necessarily be little more than pure guess. When one considers the place which India occupies in the world consumption of silver—in recent years she has taken about one-third of the world's annual production—he cannot resist the conclusion that the closing of the Indian market would bring a collapse in the world's silver market and the downward plunge of the price of silver. When one adds to this the prospect of India's dumping upon the world annually for a period of 10 years an additional amount of silver equal to about one-third of the world's total annual production, the prospect for price demoralisation becomes immeasurably increased. It is, of course, true that any sudden decline in the price of silver would restrict silver production, and this restriction would in time bring the decline of the price to a halt. In this connection, however, it should be borne in mind that an important part of the silver production in America results as a by-product from the mining of copper and lead, and that notwithstanding the decline of the price of silver the continued production of a certain amount of silver in those industries even at a loss must continue. No one can determine in advance the point at which the decline in the price of silver could be stopped.

While, as I have said, I believe any estimate must be of little or no value because of the many unknown factors, my judgment is that the price of silver would decline far below 24*d*. It would appear to be well within the range of possibility that the price might fall as low as 15*d*. and even lower.

This all presupposes, of course, that the Indian Government would continue to sell silver until it had disposed of the amount suggested in the project. As a matter of fact, the rapid decline of the value of silver would, in my judgment, bring about such a loss in the value of the Indian silver holdings, including hoards, as greatly to impede the carrying out of the project.

It would now be possible to go into some detail regarding the six main propositions into which the questions asked by the Commission resolve themselves, and which are set forth on page 1. I think, however, that the answer which can be made to these questions has been fairly well indicated in the preceding discussion. The outstanding point appears to be the high degree of uncertainty that would arise from the adoption of the project—particularly at this time.

No one, of course, can question that India has clearly as much right to adopt the gold standard as any other country. However, no nation should consider a serious readjustment of the currency without taking into account the relation of the project to the stability of the currencies in other countries. This is particularly true with respect to the gold standard, which affects so many nations—in fact, the present and future of the entire world. Any step which would endanger the stability of other countries must necessarily lessen the value of the gold standard and ultimately react upon India. My conclusions are, therefore, that India in working toward the gold standard should adjust her plans in such a way as not ultimately to disturb the gold price level, and that the time selected for the adoption of the gold standard should be when the currencies of other important countries formerly upon the gold standard are more firmly established upon the old basis. The present time is clearly inopportune, and I believe that if an attempt were made to carry out the project in its present form at this time the direct and indirect losses which would accrue to India would outweigh any possible gains.

APPENDIX 95.

Documents circulated to Witnesses in the United Kingdom and the United States of America.

A.

Copy of a Memorandum circulated to Witnesses in India.

The following memorandum, indicating the main questions which will come under the consideration of the Royal Commission on Indian Currency and Finance under its terms of reference, is published in order to assist intending witnesses in the preparation of their evidence. It is not to be regarded as exhaustive, nor is it desired that each witness should necessarily attempt to deal with all the questions raised :—

(1) Is the time ripe for a solution of the problems of Indian Currency and Exchange by measures for stabilisation of the rupee or otherwise?

What is the comparative importance of stability in internal prices and in foreign exchanges?

What are the effects of a rising and a falling rupee, and of a stable high or low rupee, on trade and industry (including agriculture) and on national finance?

(2) In relation to what standard and at what rate should the rupee be stabilised, if at all?

When should any decision as to stabilisation take effect?

(3) If the rate selected differs materially from the present rate, how should the transition be achieved?

(4) What measures should be adopted to maintain the rupee at the rate selected?

Should the Gold Exchange Standard system in force before the war be continued, and with what modifications, if any?

What should be the composition, size, location, and employment of a Gold Standard Reserve?

(5) Who should be charged with the control of the note issue, and on what principles? Should control or management be transferred to the Imperial Bank of India, and, if so, what should be the general terms of the transfer?

What provisions should be made as to the backing of the note issue?

What should be the facilities for the encashment of notes?

What should be the policy as to the issue of notes of small values?

(6) What should be the policy as to the minting of gold in India and the use of gold as currency?

Should the obligation be undertaken to give gold for rupees?

(7) By what method should the remittance operations of the Government of India be conducted?

Should they be managed by the Imperial Bank?

(8) Are any, and, if so, what, measures desirable to secure greater elasticity in meeting seasonal demands for currency?

Should any, and, if so, what, conditions be prescribed with regard to the issue of currency against hundis?

(9) Should any change be made in existing methods for the purchase of silver?

NOTE.—The above questions were circulated to witnesses in India. As the result of the oral and written evidence received in India, the relative emphasis to be laid on the various matters dealt with has become clearer, and accordingly the attached memorandum and supplementary list of "Questions to be asked by the Chairman" have been prepared for the information of witnesses.

B.

Memorandum entitled "A proposed Scheme for a Gold Standard for India."

The following outlines of a gold standard system, on the assumption that the management of the paper currency and the conduct of the remittance operations of Government are transferred to the Imperial Bank of India, have been brought to the notice of the Commission. It is considered that it will assist the examination of witnesses if they are in possession of these outlines, and this memorandum is accordingly communicated for the personal information of witnesses. It should be understood that its contents are strictly confidential, and that its proposals do not in any way emanate from the Commission.

Details of the Scheme.

2. The details of the scheme, after its complete introduction, are as follows :—

(*a*) Gold coin and bank notes to be unlimited legal tender and silver rupees up to Rs. 50 only.

(*b*) Government to be under statutory obligation to give gold coin in exchange for gold bullion at any time on payment of a seignorage to cover minting charges.

(*c*) The Imperial Bank to be under a statutory obligation to buy gold in the same way as the Bank of England and at a price fixed on a similar basis.

(*d*) Bank notes to be payable on demand in gold coin.

(*e*) The constitution of the new reserve to be as follows :—

(i) Gold holdings ordinarily to be not less than 30 per cent. of gross circulation, but may be reduced to 20 per cent. on payment by Bank of a tax of 6 per cent. on amount by which invested portion exceeds 70 per cent.

(ii) At least 20 per cent. of invested portion to be gold securities or trade bills drawn in India in sterling and having a currency of not more than three months.

(iii) Remaining investments to be Government of India securities up to a maximum of 90 crores and internal trade bills or other self-liquidating securities.

(*f*) The Bank to undertake to keep the Secretary of State supplied with funds to meet the sterling charges of Government.

Difficulties in immediate Introduction of full Gold Standard.

3. The rupee cannot be limited as legal tender as proposed above unless an opportunity be first given of converting the rupee holdings into gold. The magnitude of this liability is indeterminate, because it is not possible to estimate with accuracy the amount of rupees outstanding and the portion thereof which would be presented for conversion. Based on the best possible method of calculating these amounts, it has been suggested that the maximum number of rupees outstanding is about 350 crores, of which, at the average rate of 5 per head of population, about 150 crores will be required for circulation if the rupee became limited legal tender. Of the balance of 200 crores, 90 crores are in the Government's currency reserve, and the balance will be presented for conversion into gold. It would not be possible to provide for the immediate conversion of these 200 crores, and it is therefore necessary to proceed by stages.

Introduction of Gold Standard by Stages.

4. The following stages have accordingly been suggested for the gradual introduction of the scheme :—

(i) A statutory obligation should be imposed on Government to sell to any person who makes a demand in that behalf at the Bombay Mint and pays the purchase price in any legal tender, gold bullion at a price equivalent to the par of exchange, but only in the form of bars containing a fixed minimum weight of fine gold (say, 400 ozs. troy). A statutory obligation should also be imposed on Government to give, in exchange for gold bullion, notes or silver at a price equivalent to the par of exchange less a small seignorage charge.

(ii) A gold coin should be put into circulation, and offered as freely as resources permit in exchange for notes and silver rupees at currency offices, treasuries, and branches of the Imperial Bank of India, without any definite obligation to give gold coin for notes or silver rupees being imposed.

(iii) After a period fixed by statute (say, five years) the liability to give gold coin in exchange for notes or rupees, and also for gold bullion on payment of a seignorage, should be imposed.

(iv) After a further period fixed by statute (say, five years) the silver rupee should be made legal tender for sums up to a small fixed amount only (say, Rs. 50).

Sale of Silver.

5. The amount of fine silver in 200 crores of rupees is about 687 million fine ounces and is nearly three times the world's annual production. It would be necessary to spread the sales over a sufficiently long period, not only with the object of obtaining a good price for the rupees sold, but also with a view to diminishing the

disturbance in countries with a silver currency and the adverse effects on the world's silver mining industry. It is assumed that the sales may be evenly spread over a period of 10 years, the period suggested for the introduction of the full gold standard. This would result in an annual sale of about Rs. 20 crores' worth of silver, which is approximately equal to the average net import of silver into India in recent years. The average price obtained by the sales may be expected to be not less than 24*d.* per standard ounce (against the present price of over 30*d.*), i.e. half the exchange value of the rupee would be realised. The resultant deficiency will be met, in respect of the public holding of rupees, by the appropriation of the Gold Standard Reserve and in respect of the currency holding by the creation of Government of India book debt.

Total Demand for Gold.

6. The gold ultimately required for the reserve on the basis of a note circulation of 189·5 crores amounts to 56·9 crores against which there is at present a gold holding of 29·7 crores in the reserve. The total gold required for introducing the scheme in all its stages will thus amount to 27·2 crores for the reserve plus the gold required for converting the 110 crores to be tendered by the public, i.e. a total of 137·2 crores, or £103 millions.

Distribution of the Demand for Gold by Stages.

7. On the introduction of Stage I in para. 4 above, the extra demand for gold would arise only from substitution of gold for rupees already in hoards. Comparatively few hoards would be large enough to buy the minimum quantity sold by the currency authority, and the hoards would not be brought out suddenly. The bullion merchants would probably lay in stocks in anticipation of demand, and the aggregate amount of the first demand from bullion merchants and presenters of the larger hoards would be about Rs. 50 crores' worth of gold. As the reserves would have at the inception of the scheme a gold holding of about Rs 30 crores, it would be necessary to provide another £15 millions of gold at the outset to meet the first demand on the introduction of Stage I. The period that would elapse between Stages I and II would depend on the progress of conversion of the hoards, and Stage II would be entered on as soon as the gold reserves had accumulated to an extent sufficient to enable a gold coin to be put into circulation, and to enable the supply of such coin to be kept up continuously. During this period the demand for gold may be greater than the supply obtained by the sale of silver, and it might become necessary to supplement the supply by external borrowing. It seems unlikely that the amount of external borrowing will exceed Rs. 30 crores or will be required for a longer period than five years.

Assuming gold currency had been made freely available during Stage II, Stage III would not lead to any great increase in the demand for gold coin. The introduction of Stage IV would probably bring in a few more rupees from hoards, but the additional demand would probably not be very large, as the greater part of the hoards of rupees would have been replaced by gold during the earlier stages.

It is unnecessary to attempt to estimate precisely the amount of gold required at each stage. For all practical purposes it may be assumed from what has been mentioned above that about £15 millions would be required at the time of initiation of Stage I, a further £35 millions within a year, and the remaining £53 millions over a period of 10 years.

Cost of the Scheme.

8. The cost of the scheme finally would represent the difference between the interest on the investments in the reserve as finally constituted and the interest now received; this is estimated at 1 crore. The interest on the Government of India securities now in the reserve and the interest on the eventual holding of such securities do not enter into the question of the cost to the Government on account of the change. During the transition period there would be a further charge on account of the carrying on of metallic stocks owing to the gradual conversion of surplus silver into gold or gold securities, and the interest on external credits which would probably have to be obtained while the gold reserves were being built up. It is estimated that the charge during the transitional period would amount during the first five years to about 1¾ crores a year.

9. The chief points for consideration in connection with this scheme are (i) the extra cost involved, (ii) the possibility of getting the gold required and the effect of

its withdrawal for the purpose of Indian requirements, particularly the effect upon world gold-prices, (iii) the effect of the scheme on the silver market and the possibility of realising a reasonable price for the surplus of silver, and (iv) the effect on the monetary situation of any miscalculation under any of the headings mentioned in the preceding paragraphs.

NOTE.—For the purpose of the calculations in this memorandum it has been assumed that the rate of exchange at which the rupee is stabilised is 1*s.* 6*d.*

C.

Supplementary list of "Questions to be asked the American* Witnesses by the Chairman."

Attention is directed to the plan for the establishment in India of the gold standard, with gold coins as an internal medium of exchange, for the reduction of the status of the silver rupee to that of a token of limited legal tender, and for the sale of silver, set out in the accompanying confidential Memorandum entitled "Proposed scheme for a gold standard for India."

A.—As to the proposals relating to *Gold*—

1. Assuming that these proposals involve the absorption by India of about £103,000,000 ($500,000,000) of gold (in addition to normal requirements for the arts, hoards, &c.), of which it is assumed £15 millions would be required at the outset, an additional £35 millions within a year, and the remainder within 10 years:

What would be the effect of these proposals—

(*a*) on the supplies of credit and rates of interest in America?
(*b*) on the position and policy of the Federal Reserve Board?
(*c*) on the position and policy of the Central Banks—
 (1) of those of the European countries which have put the gold or gold exchange standard into operation?
 (2) of those which are aiming at doing so?
(*d*) generally, on the maintenance and restoration of the gold standard in European countries?
(*e*) on world gold-prices?
(*f*) on the cost of living and on wages in America, Europe, and India?

2. If European countries, and countries overseas whose financial systems are closely tied to European countries, should, as a measure of protection of their gold reserves, curtail the supply of credit, what effect would this have upon America financially and economically?

3. What would be the reaction on India of the consequences which you describe in reply to questions 1 and 2?

4. Assuming that the absorption by India of the £103,000,000 sterling of additional gold is not spread over a period of 10 years, but takes place more rapidly:

What difference would this circumstance make to the consequences which you have described in reply to questions above?

5. Can you express any opinion whether, under the scheme in question, the absorption of the additional £103,000,000 sterling of gold could in fact be spread over the period of 10 years as proposed, or whether it might not have to be supplied more rapidly?

6. Assuming that the amount of £103,000,000 sterling of additional gold required for India might be substantially increased by the withdrawal of more gold into active circulation than is allowed for in the estimates of the scheme:

What difference would this circumstance make to the consequences which you have described in reply to questions 1 and 2 above?

7. Can you express any opinion as to the desirability of the proposals of the scheme relating to gold, in relation to the interests of India, and particularly in view of the cost to India of providing a gold currency by the means proposed?

* A similar set of questions, *mutatis mutandis*, was circulated to witnesses in the United Kingdom.

8. Can you assist the Commission with any evidence as to the probable future relation between the world's demand for gold and its supply, assuming that Indian conditions remain unchanged?

9. In particular, can you give an estimate of the annual increment to the stock of gold for monetary purposes which is needed to keep pace with the economic progress of (*a*) the United States of America, and (*b*) the rest of the world?

10. In how many years will the stock of gold for monetary purposes now held by the United States of America, and at present regarded as redundant, be absorbed in this manner?

B.—As to the proposals of the scheme relating to *Silver*:—

1. Can you assist the Commission with any evidence as to the probable future relation between the world's demand for silver and its supply, assuming Indian conditions to remain unchanged?

2. Assuming the proposals referred to involve the sale over a period of 10 years of an amount of silver equal to about three times the present annual world's production:—

(*a*) What would be their effect on the silver market?
(*b*) What effect would the proposals have on the markets in copper and other base metals?
(*c*) What effect would a fall in the price of silver have on the volume of its production?
(*d*) If a fall has the effect of curtailing production, would it be reasonable to suppose that a fall in the price of silver to 24*d.* would so contract production as to stabilise the price of silver at about that level, and permit of the absorption of, say, 20 crores of rupees annually?

3. In what respects would American interests be affected by the silver sales in question?

4. Having regard to the desirability of the co-operation of the United States in the carrying through of the plan, how, in your opinion, would it be viewed by the Government and the Financial Authorities of the United States of America?

5. What difference would the imposition of a duty on the importation of silver into India make to the consequences which you describe in reply to questions 1, 2 and 3 above.

6. The average annual importation of silver into India for use in the arts, as ornaments, and all purposes other than coinage, for the last five years was 81 million fine ozs.

Assuming that the effect of the proposals under consideration, with or without the imposition of an import duty, would be substantially to reduce the importation of silver into India for these purposes:

What difference would that circumstance make to the consequences which you have described in reply to questions 1, 2, and 3 above?

7. Can you express any opinion as to the desirability of the proposals of the scheme relating to silver, in relation to the interests of India, and in particular the circumstance that silver is a favourite store of values amongst the poorer classes there?

8. Assuming the Government of India requires to raise credits in order to bridge the period between the introduction of a gold currency and the realisation of the silver which it would replace, which credits might amount to $150 million in New York and £23 million in London:

What considerations, arising either from the nature of the scheme or from external circumstances, would militate for and against a proposal by the Government of India to obtain such credits in New York?

9. Would a proposal by the Government of India to obtain such credits in New York for the purpose of carrying out the scheme referred to (for putting gold into circulation in India, concurrently with the sale of silver) be likely to encounter any such difficulties as would make it undesirable to contemplate that step?

10. Assuming that the credit of $150 million would not be required for a longer period than five years, what would be the cost to India of embarking on such a credit scheme:

(1) if the credit is not required to be actually drawn on;
(2) if the credit is only partially drawn on?

11. It has been suggested that the conversion of silver hoards into gold and the introduction of a gold currency will ultimately lead to a reduction of India's demand for gold for non-currency purposes. If this were assumed to be the case, would any modification be necessary in your replies to previous questions?

12. It is relevant to the inquiry of the Commission to consider whether the times are ripe for a stabilisation of the rupee, at a fixed rate in relation to gold or sterling.

Do you consider that there is any factor in the financial situation in the United States of America which would make it prudent to postpone any such measure for stabilisation?

13. In regard to the rate at which the rupee should be stabilised, it has been suggested that a rate lower than the existing rate will reduce the total demand for gold in connection with the introduction of a gold standard in India. What weight, if any, should in your opinion be attached to this suggestion?

14. In regard to the remittance operations of the Government of India, a question has arisen whether they should be conducted as hitherto by the time-honoured system of sales of Council Bills in London or by means of purchase of sterling bills from Exchange Banks and firms in India as has been done since 1923. It has been suggested in favour of the older system that it gives greater facilities to the people of the United States of America for payment of their jute and other contracts made with India; what importance do you attach to this?

APPENDIX 96.

Note on the Effect of Exchange on Government Revenue and Expenditure, submitted by Mr. A. C. McWatters, C.I.E., I.C.S., Secretary to the Government of India, Finance Department.

I.—*The gain in exchange to Government in the year* 1918–9, *as compared with the pre-war rate of* 1s. 4d.

In 1918–9 all expenditure in England was treated as Imperial.

The gain or loss by exchange in the accounts at that time was calculated with reference to the average rate of exchange obtained by the Secretary of State on Council Bills. This rate in the year 1918–9 was 1*s.* 5½*d.* The total sterling net expenditure was as follows:—

	£
Revenue—	
Expenditure in England - - - - -	23,629,495
Receipts in England - - - - -	3,228,996
Net expenditure - - - - -	20,400,499
Capital—	
Capital expenditure - - - - -	1,559,895

The gain in exchange to Central Revenues at 1*s.* 5½*d.* compared with 1*s.* 4*d.* on the above figures would be Rs. 2,63,16,639 in respect of *Revenue* and Rs. 20,12,265 in respect of *Capital.*

II.—*The extra return which would accrue from customs import duties if exchange were fixed at* 1s. 4d. *as compared with* 1s. 6d. *and if the following two assumptions are made:* (1) *that the volume of imports is not diminished and* (2) *that the price of imported goods rises by the full amount of* 12½ *per cent.*

Over the period April to August 1925 it has been calculated that 57 per cent. of the import duty realised was from articles paying duty on an *ad valorem* basis (including those articles for which tariff values are fixed). The remainder paid duty at specific rates.

	Lakhs.
The total customs duty on imports according to the Budget of 1925–6 is - - - - - -	37,69
Deduct Government stores - - - - - -	85
Balance - - - - - -	36,84
57 per cent. of above = - - - -	21,00
Increase at 12½ per cent. = - - - -	2,62

APPENDIX 97.

Despatch from His Majesty's Secretary of State for India, No. 51, Financial, dated the 24th April 1914.

In my telegram dated 6th March 1914 I informed you that I should address you by Despatch on the subject of the Report of the Royal Commission on Indian Finance and Currency.

The Report falls naturally into three divisions, containing respectively :—

A review and criticism of the system of Indian Finance and Currency and its administration in recent years.

Recommendations on certain matters, such as the detailed arrangements for lending part of the India Office balance, the relations of the India Office with the Bank of England and the financial organisation and procedure of the India Office, on which it is scarcely necessary for me to invite Your Excellency's observations.

Conclusions and recommendations regarding many subjects which must be considered in consultation by the Secretary of State in Council and the Government of India.

2. On the first head I have little to say. A close examination of the narrative portions of the Report might suggest the amplification or qualification of an occasional passage, or a more exhaustive statement of facts; and something might also be urged in reply on the few points where the judgment expressed on the action of financial authorities here or in India departs from the general note of approval which distinguishes the Report. But it is neither necessary nor desirable to undertake this task. I welcome the Report as the first authoritative survey of the Indian financial and currency system as a whole that has been made since the Indian Currency Committee of 1898, and as a weighty pronouncement on the policy and the measures that have gradually been evolved in the course of giving effect to that Committee's recommendations. It is gratifying to me, as I am sure it will be to Your Excellency's Government, to learn that both the policy and the measures have in essentials received the approval of the Commission. I note the generous testimony borne to "the ability and skill with which the complicated duties in connection with Indian finance have been discharged by the permanent officials to whom they have been entrusted both in India and in London" (para. 7), and to the fact that "the final success achieved by the Indian authorities both in India and in this country must be recognised as a proof of the soundness of the currency scheme itself and of the measures ultimately taken for meeting the crisis" of 1907–8, the chief occasion on which the existing currency system has been put to a severe test (para. 49). As regards the few instances in which, in the Commission's opinion, other action than that taken might have been advisable, it is sufficient to bear their comments in mind and to endeavour to benefit on a future occasion by the guidance they may afford.

3. The recommendations regarding organisation and detailed procedure in this country are being carefully considered.

4. The main conclusions and recommendations requiring consultation between this Office and the Government of India are as follows :—

(a) In para. 68 the conclusion is reached that "it would not be to India's advantage to encourage an increased use of gold in the internal circulation." Read in connection with the opinion expressed in para. 74 that "it is important that the Government should continue to act on the principle of giving the people the form of currency for which they ask," this appears to be equivalent to a recommendation in favour, first, of the continuance, without modification in the direction either of stimulation or of restriction, of the present practice regarding the sale of Council Bills which, as explained on behalf of this Office, is to regulate them so that they "shall not be on such a scale as to prevent the inflow of gold to India to the extent to which it seems likely that there will be a demand for it on the part of the public" (Appendix I, page 12), and, secondly (subject to the qualification in para. 116), of the practice of issuing gold freely in normal times from the Paper Currency Department in exchange for rupees and notes for circulation in India.

This endorsement of existing practice appears to call for no comment.

(b) In para. 73 the Royal Commission say, after pointing out their own inability to recommend on its merits the establishment of a gold mint in India, that "if Indian sentiment genuinely demands it and the Government of India are prepared to incur the expense, there is, in our opinion, no objection in principle, either from the Indian or Imperial standpoint; provided always that the coin to be minted is the sovereign (or the half sovereign), and it is pre-eminently a question in which Indian sentiment should prevail."

The difficulty of ascertaining whether Indian sentiment desires the establishment of a mint for the coinage of sovereigns or half-sovereigns is considerable. When a resolution on the subject of a gold mint was raised in your Legislative Council on 22nd March 1912, the mover expressed his preference for a ten-rupee piece; but the resolution was withdrawn, so that no definite opinion was recorded. When in my telegram of 16th May 1912 I suggested that the views of Local Governments, Chambers of Commerce, and Presidency Banks regarding a gold mint should be ascertained, the Government of India gave reasons for not acting on the suggestion; and it was accordingly not pursued at that time. In present circumstances it is clearly desirable to proceed with an enquiry as to the existence or otherwise of a genuine Indian sentiment in favour of a gold mint, the point which the Royal Commission leave in doubt. I shall be glad if you will take the necessary steps. You will doubtless draw the attention of the bodies that you consult to the opinion expressed by the Royal Commission regarding the merits of the scheme, and to the information that is available regarding the establishment that would be required and the probable cost. (See Appendices to Interim Report of the Commissioners, Vol. I, page 215.)

(c) Failing the establishment of a gold mint, the Commission recommend a renewed notification of the willingness of the Government of India to receive gold bullion at the Bombay mint. I do not anticipate that you will have any objection to this; and, if this is so, it is perhaps unnecessary to postpone the issue of the notification until the question of establishing a Gold Mint has been decided, since the establishment of a Gold Mint would require little, if any, modification in any arrangements previously introduced for the receipt of gold bullion.

(d) In para. 89 the Commission, while holding that the Government of India ought to be alive to the possibility of the aggregate sterling reserves eventually reaching an unnecessarily high figure, recommend that "the whole profits of the silver coinage, together with any interest accruing from investments or loans made from the Gold Standard Reserve, should for the present continue to be placed to the credit of that Reserve, and that no diversion similar to that made in 1907 for railway development should be under any circumstances permitted until further experience allows of a much more accurate definition of the calls which the Reserve may have to meet than is at present possible."

I am prepared to act on this recommendation, and Your Excellency will doubtless be in favour of this course. The importance of the Commission's remarks regarding the possibility of an increase of the sterling reserves to an unnecessarily high figure must not be disregarded, since such disregard would involve the danger that the full benefit would not be obtained of the economy of the Indian currency system—which is one of its advantages. But it would be useless to attempt to forecast now the time and circumstances in which any action in the sense indicated in these remarks is likely to be desirable.

(e) In para. 90 the Commission recommend without hesitation that the whole of the Gold Standard Reserve should be kept in London. Subject to any observations from Your Excellency I am ready to accept this recommendation.

(f) Paras. 96 to 100 contain recommendations regarding the composition of the Gold Standard Reserve, viz.:—That not less than one-half should be held in gold when the total exceeds £30,000,000, and that the minimum amount to be so held should be raised as soon as possible to £15,000,000, of which £4,000,000 should be provided by the abolition of the Indian branch of the Gold Standard Reserve and the consequent transfer of sovereigns from the Paper Currency Reserve in India to the Gold Standard Reserve, for location in London as soon as convenient; £4,000,000 should be obtained from the same source in exchange for securities now held in the Gold Standard

Reserve, and the remainder should be accumulated as opportunity offers for the revision of existing investments as well as by the addition of new money.

You will doubtless be in favour of increasing the amount of gold held in the Gold Standard Reserve, and I shall be glad to learn whether the standard proposed by the Royal Commission appears to you to be suitable. I shall also be glad of your remarks as to the method proposed for attaining the standard.

The transfer of £4,000,000 in gold from the Paper Currency Reserve against the rupees now in the Indian Branch of the Gold Standard Reserve would present no difficulty in itself, but it would be advantageous that, as the abolition of that branch would diminish the elasticity of the currency system, it should be accompanied by the introduction of the new element of elasticity proposed in para. 113. This would require the amendment of the Paper Currency Act.

Similarly, the proposed transfer of £4,000,000 from the Paper Currency Reserve in exchange for securities would require legislation, in connection with which you may desire to consider the comparative advantages of making the addition to the invested portion of the Paper Currency Reserve entirely (as suggested by the Commission) in the form of sterling securities, or partly in that form and partly in rupee paper. If the latter course were adopted, a corresponding portion of the amount to be added in gold to the Gold Standard Reserve would be obtained by the realisation of sterling securities now held in that Reserve and the ear-marking of the proceeds in gold.

The provision of the further sum required to raise the total of gold in the Gold Standard Reserve to £15,000,000 will, if that standard is adopted, be proceeded with as favourable opportunity offers.

(*g*) In para. 101 the Commission, in accordance with their view (stated in para. 52) as to the importance of formulating in advance and giving publicity to the policy which it is intended to pursue in a crisis, advise "that the Government should make a public notification of their intention to sell bills in India on London at the rate of 1*s*. $3\frac{29}{32}$*d*. whenever they are asked to do so (as was actually done in 1908, and confirmed in 1909), to the full extent of their resources." I shall be glad to learn whether you are in favour of such a notification, and, if so, when, in your opinion, it should be made.

(*h*) The main recommendations regarding the Paper Currency system contained in paras. 110 to 118 are as follows:—

(A) That the Paper Currency Act should be amended so as (1) to increase the permissible maximum of the fiduciary portion of the Reserve up to the equivalent of the notes held from time to time in the Reserve Treasuries plus one-third of the notes outstanding elsewhere, (2) to increase the amount that may be held in sterling securities, (3) to enable part of the fiduciary portion to be represented by loans granted in India or London.

(B) That the securities in the fiduciary portion of the Reserve should then be at once increased by the addition of six crores of sterling securities, to be transferred from the Gold Standard Reserve as shown in (*f*) above.

(C) That the 500 rupee note should be universalised, and that, in accordance with the Commission's views expressed in para. 75 as to the importance of encouraging the use of notes, additional facilities should be granted for their encashment.

(D) That gold in the Paper Currency Reserve in India should in ordinary circumstances continue to be used as at present, but that when an exchange crisis declares itself it should be given out only on such conditions as will secure its immediate export.

(E) That for the present a portion of the Reserve should continue to be held in London in gold, but that such portion should ordinarily be limited to £5,000,000.

Some of these proposals are far-reaching and will require careful consideration. The case for an increase in the permissible maximum of

the fiduciary portion of the Reserve and for enabling a part to be represented on occasion by loans appears to me to be strong. The questions whether the maximum shall be fixed, and the addition to the permanent securities effected, in the manner proposed are more difficult.

With regard to the first question, it is to be remembered that if the plan proposed by the Commission is adopted, any encashment of notes or withdrawal of notes from the Reserve Treasuries at a time at which the non-metallic portion of the Reserve is at the maximum amount permissible will require a simultaneous diminution of that portion and adjustment of the amount of the metallic portion. The inconvenience involved in this plan, and indeed in any plan under which the invested part of a Paper Currency Reserve is limited to a percentage of the circulation instead of to a fixed sum, must not be overlooked; and it is to be remembered that such inconvenience is peculiarly great when the Reserve is scattered over a wide area.

The second question has already been referred to under (*f*) above.

I shall await with interest your observations on all the recommendations under this head.

(*i*) In para. 123 attention is called to the importance of reviewing periodically the balances held by the Government of India so as to secure all possible economy. The subject is one which necessarily comes before your notice at frequent intervals and with regard to which it may be assumed that your practice, at any given time, represents the result of the most recent experience. The present moment is scarcely favourable to any formal examination and report on the subject, partly because this would involve a postponement of the time at which your examination of the other recommendations of the Royal Commission can be completed, and partly because the recent increase in the limits on savings bank deposits introduces a new factor that will require to be carefully watched. But you will doubtless bear the subject in mind and in due course make any modifications or submit to me any proposals that may seem to you to be desirable.

(*j*) I anticipate that you will similarly desire to postpone for a time the consideration of the advantages and disadvantages of a change in the date of commencement of the financial year, to which the Commission refer in para. 128.

(*k*) In paras. 134 to 169 the advisability of granting loans in India from the Government balances, in addition to such as would be granted under the recommendations summarised in (*h*) above, is discussed. The recommendations are that such loans should be made to Presidency Banks against security; that they should be for short periods; that they should not be confined to periods of stringency; that the rate of interest should be fixed by negotiation in each case; and that the amount should be based on experience gained by cautious and tentative action. My telegram of 22nd October 1913 and my Despatch dated 23rd January 1914, No. 14 (Financial), approved provisionally a policy similar to that now recommended, except that it confined loans (in accordance with your suggestion) to periods when the Bank rate reached, or was about to reach, a high figure such as 7 or 8 per cent., and fixed the rate of interest at 1 per cent. below Bank rate. Your experience of the offer made in accordance with my telegram will help you towards forming an opinion on the policy generally and in particular on the comparative advantages of the method then adopted and the method now recommended for determining the time at which, and the terms on which, loans should be granted.

(*l*) In para. 167 attention is drawn to the possibility that the amount of rupee loans issued by your Government may with advantage be increased. This had already been the subject of considerable correspondence between the Government of India and the Secretary of State in Council, in consequence of which the amount of the rupee loan announced in your Budget for 1914–5 was fixed at five crores.

(*m*) I understand that you have under consideration the possibility of increasing the popularity of the forms of security issued by the Government of India to which attention is drawn in para. 169.

(*n*) In paras. 170 to 186 approval is expressed of the course that has been and is followed, in regard to the sale of Council Bills. Various suggestions that

have been placed before the Commission for modification of existing practice are rejected. In some passages a distinction is drawn between two views as to the limit that should govern the amount of sales; the one, that the trade demand for remittances should be met subject to not preventing an inflow of gold to India to meet the demand of the public for gold; the other, that the requirements immediate and prospective of the Secretary of State in Council in London should be the only factor to be considered. Certain points regarding the relation between these views, the possibility of conflict between their practical consequences, and the course to be taken in such an event are discussed in the enclosed note.

(o) In para. 222 it is recommended that a small expert body be appointed with instructions either to pronounce definitely against the establishment of a State or Central Bank in India at the present time or to submit a concrete scheme for its establishment. I see no reason why effect should not be given to this recommendation. If you agree, I shall be glad to receive detailed proposals from you.

5. The summary given above is not exhaustive. It is intended to assist you in the consideration of the Report by indicating the points to which it seems to me that discussion between the Government of India and myself should first be directed and the provisional conclusions which, subject to your remarks, I am inclined to adopt on certain of them. Owing to the number and complexity of the issues raised and the pressure of other work in your Finance Department, some time may elapse before you are able to furnish me with a full statement of your views, and you may wish to deal with the questions in small groups or one by one. I am anxious to meet your convenience in this respect, and am content to leave to you the choice of the order in which the discussion of the various subjects shall be taken up.

ENCLOSURE.

Note referred to in para. 4 (n).

In paras. 177 to 186, and incidentally in other passages, the Royal Commission consider what are the limits of amount within which Council Drafts should be sold. To discern clearly how far the Commission agree with the practice that has been followed in the past, what is their attitude towards suggestions for modification that have been placed before them, and what they recommend for the future, is of much importance because, as stated in para. 170, in language of which the appropriateness will be recognised by all who have close practical acquaintance with Indian finance, the sales of Council Drafts "are the central feature of the machinery by which the Indian finance and currency system is at present managed" (para. 170). The Commissioners themselves have not attempted to lay down any brief rule that can be mechanically followed; and it does not seem possible to summarise their conclusions in any such form. To obtain from them practical guidance it appears necessary to collect their observations on what was put before them as to existing practice, and on the possible modifications in detail or in principle that they considered, and to see what are the results to which such observations point:—

(a) Their summary of recent practice as explained to them in evidence is (para. 178) that it has been "to sell as long as there was a demand [within the recognised limits of price] and as long as it could be met from the resources of the Government in India." It might have been added that, as was stated in evidence (see Appendix I, page 12) and demonstrated by statistics (*ibid*, pages 21 and 84), this practice has been followed "subject to the consideration . . . . that the sales shall not be on such a scale as to prevent the inflow of gold to India to the extent to which it seems likely that there will be a demand for it on the part of the public." It might also have been added that, as mentioned in paras. 33 and 174 of the Report, bills are sold without limit at 1*s*. 4⅛*d*. per rupee.

(b) The possible modifications considered by them were (para. 179), "that the Secretary of State should never sell more than the amount of his home charges, or that he should restrict his sales to the amount entered in the Budget estimates, or again that he should adjust the sales in such manner as to keep his home balance from rising much above the working figure of £4,000,000."

As regards the results that have followed from the practice described in (*a*) and the value of the suggestions mentioned in (*b*) the finding of the Commission is definite.

(*a*) In para. 133 they say that they find no fault with the course taken by Government in recent years, though they mention that, if the recommendations which they make as regards loans in India are approved, the occasions, though not the extent, of the transfer of money from India to London may have to be revised.

Similarly, in para. 179 they emphasise the fact that "while, in consequence of recurring surpluses over budget estimates, the London balance has been abnormally high for the last few years, no money has been brought home" by the sale of Council drafts "which has not been used or will not be used for Indian Government requirements in the United Kingdom." The same view is repeated in para. 186.

(*b*) In para. 179 they state that they are opposed to the suggested limitations on the amount of sales. They refer more than once to the important undertaking given by the Secretary of State in Council in 1904 that Bills will be sold without limit of amount at 1*s.* 4⅛*d.* per rupee, and do not indicate that they contemplate any alteration.

Thus the procedure actually followed has led to results which the Commissioners think suitable, and the alternative procedures considered by them, which would have led to different results, are rejected. But emphasis is laid (paras. 179, 180, and 186) on the view that the only real justification for the sale of drafts is to be found in the desirability of meeting the Secretary of State's requirements, immediate and prospective, in the wide sense in which (para. 186) these words are understood by the Commissioners, and not in the desirability of meeting the convenience of trade. From para. 186 it would appear that what is said on this point is intended rather to suggest an amendment of the explanations given to the public, than a change of practice, an interpretation borne out by what is said about the results of past practice.

But it is not superfluous to consider the questions: (1) how far it is probable that a rule that Council Drafts should be sold to meet the demands of trade, subject to not impeding the flow of gold to India to the amount required in India for absorption by the public, might have in the future (though it has not had in the past) a different practical result from the principle laid down by the Commission that sales should be limited by the amount of the Secretary of State's requirements, present and prospective, in the sense defined in para. 186; (2) what guidance can be gained from the Commission's Report as to the action to be taken in the event of such conflict arising.

That such a conflict is improbable is shown by the coincidence, noted above, of the results of following the first principle with those that the second principle is intended to produce and also by the fact that any increment of the trade demand, expressing itself through an application for Council drafts, tends automatically to set up an additional requirement of the Secretary of State in Council, viz. money for the purchase of silver. But, though improbable, the supposed conflict is not impossible. It is conceivable that at a time when the Secretary of State held resources sufficient, on a reasonable estimate, to meet his requirements immediate and prospective, and when a stock of gold and silver was held by the Government of India sufficient to meet the immediate and prospective demand of the public, a trade demand might arise for remittance to India and express itself in applications for Council Drafts. To grant such drafts would involve a departure from the principle laid down in para. 186. To refuse them would involve "the export to India on private account of more gold than is actually required in India for absorption by the public," a course which the Commission regard as involving disadvantages set forth in para. 176.

The difficulty of choosing between the two courses would, in part, be automatically removed by the operation of the rule (if still in force) under which sales of bills are made without limit at 1*s.* 4⅛*d.* per rupee, the proceeds being treated, if necessary, as a temporary addition to the portion of the Paper Currency Reserve held in London. If this did not completely solve the problem, the Secretary of State and the Government of India, so far as they were entirely guided by the views of the Royal Commission, would have to act in accordance with such view as they could form on the question whether an increase was more probable in the future in the Secretary

of State's requirements in London, or in the desire of the public in India to obtain gold. In the former case the decision would, no doubt, be in favour of meeting *pro tanto* applications for Council Drafts in the form of telegraphic transfers; in the latter case it would be in favour of rejecting applications, and thus forcing the applicants to send gold to India.

APPENDIX 98.

Extracts, &c., from Telegraphic Correspondence between the Secretary of State for India and the Government of India, Finance Department.

1. *Telegram from Viceroy, Finance Department, dated 8th October* 1924.

Early decision on fundamental question of policy is essential in view of the strengthening exchange, which seems likely to rise above 1*s*. 6*d*. We are convinced that the time has come when we should definitely decide against any attempt to push rupee above 1*s*. 6*d*. unless renewed fall in gold value of sterling takes place. It is now beginning to be realised generally that the stringency in the market is the direct outcome of Government action in contracting currency, or rather in placing strict limits on possibilities of expansion. The volume and importance of the opposition to this policy is increasing and was the basis for the support, not from Indian interests only, of Sir Purshotamdas's Currency Bills which have, however, not been introduced and therefore lapse. We should have difficulty in refusing to provide more generously for additions to currency even if we wished to do so, and there is serious risk of a financial crisis if we keep the screw on too tight. Moreover, we cannot afford to keep market bare of loanable funds if we are successfully to raise a rupee loan in 1925 and still another in 1926, when we have large amounts of bonds maturing.

It will follow, if this view is accepted, that during the coming busy season we should endeavour to prevent a rise above 1*s*. 6*d*. by free sales of Councils and sterling purchases both from our Treasury balances and by issuing currency against sterling purchased for Paper Currency Reserve so far as necessary. It is realised that this may raise the question whether the existing limit of Rs. 85 crores of securities in reserve may not have to be increased. It is probable that it would be desirable in any case to increase our statutory powers up to, say, Rs. 100 crores next winter, and we consider that we can justify this increase by normal expansion of the note issue which will be required to meet the increasing trade requirements of the country. The general policy which we have tentatively in mind would be—

(*a*) to retain as our primary purpose maintenance of comparatively stable rupee prices;

(*b*) to fix in our own mind on 1*s*. 6*d*. sterling as the figure at which we desire to stabilise rupee so long as this primary purpose is not endangered, which is only likely in the event of renewed falling in gold value of sterling; and

(*c*) to wait until gold and sterling are on a par before fixing the rupee by statute.

But we realise that questions of such fundamental importance should not be decided without a formal enquiry by some kind of Committee. Such a Committee might consider also other connected questions such as transfer to the Imperial Bank of the management of the Paper Currency, Remittances, &c.

We have had an opportunity of discussion with Warren, who is strongly of opinion, with which we agree, that we should announce that we are prepared to buy sterling without limit at 1*s*. 6⅛*d*. Such an announcement, we believe, would have reassuring effect and would remove the element of uncertainty, which is at present having a disturbing effect on the market and may produce a real danger.

2. *Telegram from Secretary of State to Viceroy, Finance Department, dated 10th October* 1924.

I share your view that it is of utmost importance that confidence of market should be maintained, and I am prepared to agree to further announcement as this object does not seem to have been achieved by your letter to Bengal Chamber of 25th August. It seems to me, however, that the vital consideration is not so much the actual level of exchange at the moment as the avoidance of such abnormal stringency as might threaten the financial and economic position. I feel also that work of committee, if

such is appointed, might be prejudiced if we peg upward limit of exchange, and that there is danger in announcing any definite figure as leading to conclusions on part of public which might not eventually be realised. I think, herein following underlying conception in your telegram of 1st October, that in present conditions safer criterion is to be found in the maintenance of adequate cash position of Imperial Bank, and so avoiding any untoward rise in bank rate. I cannot but think that market would be assured that you have power to do this if you forthwith announced intention of taking steps at forthcoming meeting of Legislature to raise fiduciary limit of Rs. 85 to Rs. 100 crores.

I suggest, therefore, announcement on following lines. Government of India, in consultation with the Secretary of State, have given careful consideration to the situation indicated by the recent rapid rise in exchange. The Government of India announce that they will, in consultation with the Imperial Bank, take such steps as the market position may demand to anticipate and relieve any undue stringency that may threaten or occur during this busy season, and with this end in view they propose at the next session of the Legislature to take powers to increase the limits up to which currency may be issued against securities from Rs. 85 to Rs. 100 crores.

You could also announce that, as in last season, Government intend in effecting remittances to act with a view to obviating any unduly rapid appreciation of the rupee.

I suggest we should endeavour to regulate remittances in such a way as to avoid, if possible, a greater rise than, say, $\frac{1}{8}d.$ in any one week.

3. *Telegram from Viceroy, Finance Department, dated* 11*th October* 1924.

Your telegram dated 10th October, 2872. We consider announcement suggested by you inadequate. It adds little in fact to the reply given already by the Finance Member in the Assembly to Purshotamdas' question, in which Government stated their readiness to ask for further statutory powers if required. This reply was well received as being more explicit than the terms of the letter addressed to the Bengal Chamber, but last week's events have only served more to convince us that unless there is assurance that an upper limit to the exchange can be guaranteed during the coming busy season confident market cannot be restored. The suggestion made by you for preventing an undue rise in exchange in any one week appears to us quite insufficient to meet the gravity of the situation. We do not agree that mere avoidance of abnormal stringency is the vital consideration. The element of uncertainty as to limits to which the exchange can rise has become even more vital. The matter has been in our minds for some time, but we have deferred addressing you until we had opportunity to discuss with Warren, who, after studying restriction in Bombay, strongly confirmed our view that increase in rate beyond 18*d.* is to be deprecated in the best interests of the country and of our future financial operations, and that public announcement is most desirable and indeed imperative.

The point you urge, that to peg exchange in advance of the appointing of the Committee has certain disadvantages, is fully realised by us, but we feel that greater dangers are involved in any other policy. It is, we consider, out of the question that the uncertainty should be allowed to continue for several months more. We think it highly improbable that the view could be taken by any Committee that higher exchange than 1*s.* 6*d.* is desirable. This rate is one which would not involve the disturbance of present price levels, but both Indian exports and industries would be adversely affected by any higher rate. We find already that Tata Iron and Steel Company is seriously affected by rise in exchange. The Committee would not be absolutely precluded from recommending a higher rate by a decision now to give an upward limit of 1*s.* $6\frac{1}{2}d.$ for the time being, but even if it were, we feel it our duty as a Government in existing circumstances, to arrive at a decision in advance. Further, we believe that an opportunity, which may not recur, is offered at the present moment of obtaining general acquiescence even in Bombay in a policy which will give us a permanently higher rate than 1*s.* 4*d.* gold. We regard it as of great importance, politically, quite apart from financial merits, to take commercial opinion along with us in this matter. We therefore strongly press that our proposals should be accepted.

4. *Telegram from Secretary of State to Viceroy, Finance Department, dated* 15*th October* 1924.

Exchange. Your telegrams dated 8th and 11th instant. The difficulties which you have had to face in maintaining view, with which I am in entire accord, that

time has not yet come for final fixation of rating of rupee, are fully realised by me, and I appreciate vigour and skill with which case for postponing this issue has been expounded on numerous occasions by Finance Member despite strong pressure from certain quarters for attempting forthwith permanent solution. I regret all the more keenly in these circumstances that I am unable to see eye to eye with you on the action to be taken at the moment.

In considering your recommendations main object that weighs with me is to uphold cardinal position that world economic conditions are still too unstable to justify renewed attempt at exchange stabilisation and to avoid any steps that might impair present freedom of action and militate against the eventual adoption of a rating that might seem, after full enquiry in due course, most conducive to general interests affected and to be capable, without undue strain, of being maintained.

No indication has reached me that Indian trade in its broad aspects is likely to be threatened by such a gradual rise in exchange as has been in progress for some time, or that remittance operations conducted on lines suggested in final paragraph of my telegram of 10th instant (supplemented by this telegram) will be insufficient to control any excessive uprush of exchange. Further, such details as I have with regard to Indian internal prices seem to show a rising tendency despite upward curve of exchange. Pegging of exchange would militate against your power of control even if this movement cannot ultimately be avoided owing to world prices, and would tend to defeat primary object of maintaining the stability of internal prices (see your telegram dated 8th instant). At the same time I sympathise altogether with feeling of apprehension which is hanging over market, that absence of automatic facilities for currency expansion by import of gold might lead to a stringency which might threaten fundamental economic position. While it is not feasible to remedy this defect, in existing conditions, proposals in my telegram of 10th October were directed to meeting, what it still appears to me to be, the essential danger point of present abnormal situation, and actual decision to take further powers for an increase in the fiduciary issue is, in my opinion, an important advance on the general assurance given previously.

Government have, as regards pegging upward limit of exchange, up to now advisedly refrained from establishing any absolute maximum rate and have studiously avoided implications regarding the future. If Government were now to commit itself to a maximum sterling rate any such arbitrarily fixed rate would be bound to have strong influence on the anticipations of the market as to permanent rating of the future, though here again grounds for dispute would be furnished as to whether eventual rate would be the rate as pegged in sterling or the present equivalent in gold. In either case Government would have gravely compromised their liberty of action, and in the event of a material rise in gold prices (which contingency cannot be overlooked) Government might have cause to regret any decision taken now. Moreover, Government would be exposed, having once committed itself to the pegging of upper limit, to demands that attempts should also be made to peg lower limit in the event of exchange weakening substantially hereafter. It is difficult to see without this further step that importation of funds to India will be materially helped, as no limit can be set to possible loss on exchange on retransfer. On the other hand, any action tending to raise matter of reverses is to be deprecated until Government are prepared to use full resources in support of a permanent rate.

We have before us the fact that in many instances during recent years, in periods of fluctuating world prices, when attempts have been made to peg exchange the result has been substantial loss to countries concerned, and great inconvenience and difficulty have been caused to the trader when the peg has broken down or been removed.

My conclusion is that Government should refrain from any absolute pegging of upward limit of exchange or from appointing a Committee at present time. The arguments on which Finance Member has laid stress in the past, in particular the uncertainty of present world economic factors, have lost none of their strength. We have to reckon, apart from the uncertainty as to the gold value of sterling to which you refer, with the even greater uncertainty attached to the commodity value of gold, entailing reactions which India, like other countries, could not escape.

I should observe in this connection, in order to avoid possible misunderstanding, that under clause (*b*) of your telegram of 8th October you are apparently prepared to envisage provisionally the ultimate rating of the rupee with a greater degree of precision than suggests itself to me at present. The figure mentioned by you is purely arbitrary and cannot be based on reliable data as the future of gold prices is still

obscure. At the same time you will realise that it is no question of any particular prognosis that impels me to the view that it is premature to proceed at the moment with the idea of a Committee or to set an absolute upward limit to the rupee for time being in the manner you suggest.

I recognise that at some future date it will be desirable to constitute an authoritative body to advise as to the rating of the rupee and possibly as to other matters in connection with Indian currency and exchange.

Meanwhile, in my judgment, a prudent policy would be based on following main objectives, viz. the maintenance by the Imperial Bank of an adequate cash position, with a view to avoiding any serious departure from what may be regarded as the normal Indian monetary trend; maintenance of comparatively stable rupee prices; the regulation of remittances, with a view to the avoidance of excessive fluctuations of exchange, and the retention of a free hand by Government to take appropriate action when the time comes, with a view to fixing exchange rating at point deemed most conducive to Indian interests as a whole.

It is worth observing in this connection that when the time comes for the submission of the matter to a Committee it will be well to time reference so that report may be presented before the busy season, so that action may be taken on it at period of year most promising for success, assuming conditions continue normal. Danger of submitting report towards close of active season is that the chance of making any new ratio effective may be impaired if conditions prove unfavourable in succeeding busy season.

For reasons furnished above, I must adhere to decision communicated in my telegram of 10th October, on which I should be glad if you would act. As regards increase to Rs. 100 crores of fiduciary issue, I am advised that you could act, in case of emergency, by Ordinance under section 72 of the Government of India Act. You may consider it desirable to refer in announcement to this point. It is open to you, of course, also to amplify announcement by including reference to recent extensive remittances as indicating Government's desire to help market.

5. *Telegram from Viceroy, Finance Department, dated 4th November* 1924.

Exchange. Your telegram dated 15th October. Serious consideration has been given by us to your arguments, which were fully present in our own minds when our proposals were made, and we desire to make the following observations.

Your main argument against acceptance is that the world economic conditions are still too unstable to justify the renewal of the attempt at exchange stabilisation. This argument is in substance the same as we have ourselves put forward repeatedly against the demands for altering the statutory ratio. The argument can easily be pressed too far, however, so far as it affects India. We have always recognised the possibility of a renewed fall in the purchasing power of gold, and we agree that this consideration is decisive against any immediate fixation of the rupee in terms of gold; but as against fixation in terms of sterling, particularly if such fixation is tentative as we propose, the argument loses much of its force when it is remembered that, at present, sterling is at a discount not much less than 10 per cent. in terms of gold, so that to that extent a fall in the purchasing power of gold will be offset by the rise in gold value of sterling, which involves a corresponding rise in the gold value of the rupee without any departure from the rate of 1*s.* 6*d.* sterling.

With regard to your reference to other countries who have attempted to peg exchange, the case of India is not parallel. The former attempted to fix a lower limit of exchange at a time when their trade had been noticeably disturbed and the internal economic conditions were in a state of chaos. Our present proposal as regards India is to fix an upper limit when trade as well as internal economic conditions have made progress substantially in return to normal lines. We doubt whether sufficient weight has been given by you to the great improvement in internal economic conditions which has taken place in India, and to the check which in the last few years has been placed on the expansion of currency. In the last two years the raw materials of India have been in great demand, with the result that there has been a substantial trade balance in her favour.

The demand for Indian commodities may be expected to rise further with the return of normal economic conditions in Central Europe, and it is difficult to envisage, in the absence of a widespread failure of the monsoon or other catastrophe, a situation in which there would be in the near future a complete swing of the pendulum.

As regards your comments on the course of Indian internal prices, the Calcutta index number of wholesale prices, which is more reliable and more comprehensive than the all-India index number, does not disclose any tendency to rise. The same is true of the Bombay index number. We would further point out that in the case of commodities which have a world price—e.g. cotton, steel and sugar—in recent months there has been a marked fall in the rupee price; in the case of wheat, the result of the appreciation of the rupee has been that the price has remained nearly stationary in India while it has gone up considerably in England and America.

While then we agree that the waiting policy adopted hitherto has been the right one, in our opinion it is almost, if not quite, impossible for practical reasons to maintain it. You observe that such a gradual rise in exchange as has for some time been in progress is not likely to threaten Indian trade in its broad aspects, and that remittance operations conducted on the lines suggested by you should suffice to control any excessive uprush of exchange. We must point out that the rise in exchange which has occurred already has not hitherto had any serious adverse effect on trade because it has so far not exceeded the limits which have generally been anticipated. There can be no doubt that much harm will be done by any further material rise. While it is possible, of course, to control a further rise by adjusting our remittance operations, it should be remembered that exchange has risen from 1*s.* 4½*d.* to 1*s.* 6*d.* during the last six months in spite of heavy purchases of sterling, and that such violent and frequent adjustments in our purchase procedure as will be necessary in order to keep the rise under effective control, cannot but have the most harmful effects. The rates which were accepted at the Council Bill sales of the 14th and 21st October has already furnished evidence of this. As a result of our large purchases of sterling in October the exchange market is, for the moment, quiescent, but there is no guarantee that there will not be a recurrence of similar conditions in an aggravated form during the busy season.

Moreover, it is our deliberate opinion that we cannot afford to allow the rupee to appreciate much above 1*s.* 6*d.* sterling during the coming winter, and if this is accepted the importance of an announcement immediately regarding the upper limit for exchange is obvious. Both in Calcutta and Bombay the trade is in an extreme state of tension and expectant of a Government announcement, in the absence of which gambling in exchange will continue on a large scale to the serious detriment of genuine trade interests.

Further, we regard with extreme concern the prospects of borrowing by Government unless action is taken now to restore confidence. We are convinced that unless there is some very big change in the conditions reacting on the Indian monetary situation, the issue of a rupee loan in India, of any appreciable amount, in the summer of 1925, will be an impossibility.

We reduced our demand from 20 crores to 15 crores in 1924; eventually we got only 13 crores and were lucky to get that. We cannot curtail very materially our capital programme even if we wished to do so, and we should regard as contrary to the true interests of India any considerable curtailment. We should be driven to raise a sterling loan in order to continue our capital programme. The size of the Indian sterling debt is, in our view, already sufficiently heavy for the present. In a period of bad monsoons external borrowing will be inevitable, and Indian credit abroad, if we can avoid it, ought not to be called upon to bear the strain of the issue of an external loan at a time of good monsoons when there is no difficulty in remitting money abroad, and the need for borrowing abroad only arises because the capital cannot be raised in India. Moreover, external borrowing at a time when there is uncertainty as to the future of the rupee, involves an exchange risk and becomes very speculative. We would remind you that in 1926 we have a maturity of 38 crores to deal with, and it is unthinkable that by postponing a decision in regard to exchange we should run the risk of not being able to renew a large proportion of these bonds in India.

The announcement which you suggest is, we consider, quite insufficient in itself to have any reassuring effect, as it will amount only to a reiteration of the declaration we have already made, that there will be no hesitation on the part of Government to take further powers in a matter of sterling investments in the Paper Currency Reserve. Something of greater importance is expected by the market, and we consider it better to make no announcement at all if we have nothing better to announce. Such an announcement would at once stimulate the demand, for the moment quiescent, for action on the lines of Purshotamdas' Bill, and would result in increasing opposition to our Bill when it is introduced.

We propose that as soon as announcement of our maximum rate is made, Council sales should be discontinued for the present, and all sterling purchases effected through the Imperial Bank at the rate of 1*s*. 6½*d*. only.

6. *Telegram from Secretary of State to Viceroy, Finance Department, dated* 19*th November* 1924.

Exchange. Your telegram of 4th November. It will have been realised that the decisions in my predecessor's telegram dated 15th October were not reached without full consideration of this important question in all its bearings, but matter has again received most careful attention in view of your further telegram.

The announcement of any maximum upward limit to exchange is likely to be regarded as the first step in the direction of eventual fixation, and arbitrary point selected would have to be justified, which it would be difficult to do with convincing effect in existing uncertainties. Having once accepted a new responsibility as regards upward point, Government could scarcely avoid, for long, complementary and more dangerous responsibility of fixing a lower limit and supporting that limit, in event of any material weakness developing, with full extent of its resources. Whatever later reaction world price movements may have on exchange, we cannot leave out of account possibility of some decline from existing level of exchange, especially in view of recent rapid rise in sterling-dollar exchange, which has already, presumably, had some influence in checking rise of rupee-sterling exchange. This tendency may manifest itself further unless counteracted by other forces if, in accordance with feeling in well-informed quarters (*vide* city notes in *Times* of 7th November), the pound moves at no very distant date to parity. If capacity of Government to handle exchange problem effectively at proper time is not to be compromised, it is necessary, in my judgment, to avoid commitments which may prove embarrassing subsequently and to retain freedom of action until greater stability in international factors has been achieved and time is favourable for taking up question of the permanent fixation of rupee exchange.

I agree with you that, as matters stand at the moment, our efforts should be directed towards averting material rise in exchange above 1*s*. 6*d*., and I am quite prepared, in the event of exchange showing a marked tendency to break away in upward direction above that point, that we should conduct remittance operations on scale which would hold tendency in check. We should have to consider as season develops, in light of trade and market conditions, how far it is desirable to persist in such a policy if it threatens to lead to an undesirable degree of expansion. There seems no reason to think that market position will be impaired as regards future borrowings if cash balances of Imperial Bank are adequately replenished so that market conditions conform to normal monetary trend and remittance operations are conducted on lines stated above. Prospect as regards future borrowings rests much more on actual monetary conditions than on announcement of present policy, which may or may not be modified. I share your view that the restriction of the growth of India's sterling debt, so far as may be, is desirable, but it is to be remembered that the opportunity of raising the exceptionally large loans obtained in India during the time of war and afterwards arose out of special circumstances, including the heavy currency expansion between 1917 and 1920, the influence of which continued subsequently, especially during the period of severe trade depression, despite the actual contraction of currency which took place after 1920.

As main objections to your proposals, recapitulated briefly above, remain, I have decided, after fullest consideration, to adhere to decisions communicated in my predecessor's telegram dated 15th October. It is not necessary for me, in the circumstances, to examine in detail the suggestion in final paragraph of your telegram, which seems to imply that Government should so act as to stimulate rise in exchange to 1*s*. 6½*d*. I see objection to the adoption of any such rigid standard. It seems preferable to work on lines now in force, which make it clear that Government have no preconceived aim in the matter of exchange apart from desire to avoid excessive and rapid fluctuations. I do not understand why any announcement regarding the matter should be expected by markets, but feeling would doubtless disappear when it is clear that no such announcement is forthcoming and public are left to place their own interpretation on Government's attitude. You could make it known, of course, that attitude of Government is, broadly speaking, the same as that which has prevailed during past year, and that it is still important to avoid any positive commitments until, at any rate, gold and sterling are synonymous again and there is assured prospect of maintaining parity.

7. *Telegram from Secretary of State to Viceroy, Finance Department, dated 24th September* 1925.

Exchange. I gather that your definite view is that exchange should not throughout this busy season be allowed to rise above gold import point on 1*s.* 6*d.* basis. While final developments of monsoon may affect extent of demand for rupees, there is still possibility of persistence of tendency for exchange to rise, which could be kept down only by what would amount to unlimited remittance at fixed point, and figure of £14,000,000 mentioned previously is to be regarded, presumably, as provisional only. If demand for rupees were to continue for a prolonged period on extensive scale there might be some risk of excessive expansion if upward limit of exchange were pegged as suggested. I cannot commit myself, therefore, in present circumstances, to view that exchange should in no circumstances be permitted to rise this winter to, say, above 1*s.* $6\frac{3}{16}d.$ or 1*s.* $6\frac{7}{32}d.$, though I am prepared to accept this figure provisionally as governing for the time being our remittance policy. Moreover, I feel strongly that it would not be right to present Currency Commission with a *fait accompli* at the very moment when they are commencing operations. I therefore suggest, if market conditions point that way, rate for remittances might be allowed to move shortly to 1*s.* $6\frac{7}{32}d.$ This figure is sufficiently near 1*s.* 6*d.* gold import point, and would not indicate any change of policy.

With regard to your recommendations for the financing of remittances, the present easy money conditions indicated by low bank rate suggest that we should not resort to expansion of currency so soon. I therefore think that there would be distinct advantages in following the original idea suggested by you. Recent uncertain developments of monsoon also point to the undesirability of premature expansion. I would therefore be glad if you would reconsider Ways and Means advance or Treasury Bills to be combined with note issue expansion as season progresses and money conditions harden.

As regards Home Treasury position, existing balances will probably suffice till towards end of January, on the assumption that they will not be further strengthened by remittances.

8. *Telegram from Viceroy, Finance Department, dated 9th October* 1925.

With reference to your telegram dated 24th September, Exchange, we note that you accept provision as governing our remittance policy for the time being, that exchange should not be allowed to rise above gold import point on basis of 1*s.* 6*d.*, and it is not our wish to anticipate policy which should be pursued in the busy season later. We do deprecate, however, proposal to allow exchange to move to 1*s.* $6\frac{7}{32}d.$ This figure is somewhat above the actual gold point, and we are convinced that our action would be misunderstood by market and would be regarded as a change of policy, and the effect almost certainly would be an avalanche of sterling sales in anticipation. Since our last telegram position has altered somewhat. Recently we have not had to purchase large amounts of sterling, and we anticipate that our balance at the bank on 16th instant will be Rs. 8 crores, less the rupee cost of any further sterling purchases. Moreover, we expect the demand for money will begin earlier than usual owing mainly to the early season for cotton, and bank rate has already been raised to 5 per cent. We think it likely that we may be able to postpone till the end of October any expansion of currency. It will, therefore, not be likely that expansion of currency will coincide with very easy money conditions. It is possible at the same time that it may be convenient to combine policy proposed by us with Ways and Means advances from the bank later on. We will bear this possibility in mind and watch situation.

9. *Telegram from Secretary of State to Viceroy, Finance Department, dated 19th March* 1926.

Pronounced weakening of exchange recently makes it desirable that we should be prepared for possibility that exchange may decline to lower gold point as determined on basis of 18*d.* gold rupee, which may presumably be taken at 1*s.* $5\frac{25}{32}d.$ telegraphic in present conditions.

2. Recent policy of holding upper limit of exchange at 1*s.* $6\frac{3}{16}d.$ was directed towards the establishment of an equilibrium between external and internal prices, which would facilitate stabilisation of rupee at 1*s.* 6*d.* gold. I recognise inconvenience

of Government having to intervene actively to maintain the lower limit of exchange at a time when the Currency Commission is sitting, but when Government decided to peg upper limit of exchange the inconvenience of positive control was accepted definitely. Result has been an expansion of currency which it may be necessary to draw off if exchange relapses to lower gold point by sale of reverses. You will agree that this should, if possible, be avoided as the sale of reverses would be open to much public misunderstanding and misrepresentation. I suggest, therefore, for consideration, whether before this stage is reached some contraction of note issue should not, with a view to stiffening market in India, be effected forthwith against re-transfer to Treasury of part of sterling securities earmarked this winter to currency reserve. I shall be glad to receive at an early date an appreciation of exchange prospects and your recommendations on above matters.

APPENDIX 99.

Letter from Messrs. Thomas Duff & Co., Ltd., Calcutta, to the Joint Secretaries to the Royal Commission on Indian Currency and Finance, dated the 5th January 1926.

We are in receipt of letter No. 697, dated 30th ultimo, and in reply to same detail below the figures of increases granted since the year 1913 to the wages of our workers, together with the months and years in which successive increases were granted :—

Per cent. of increase.	Month.	Year.	
10 per cent.	May	1918.	
10 per cent.	September	1919	20 per cent. above pre-war.
20 per cent.	January	1920	40 ,, ,, ,,
10 per cent.	October	1920	50 ,, ,, ,,

A "Khoraki" payment has also been made for some years and this special remuneration was sanctioned to make up, to some extent, for jute mills having to resort to a working week of four days only. This "Khoraki" payment automatically ceases when the mills are in a position to increase output.

The details of "Khoraki" paid and the dates when started are as under :—

	April 1919.	April 1921.
	Annas.	Annas.
Shifters	3	4
Workers drawing less than 10 annas per day	4	6
Workers drawing more than 10 annas but less than Re. 1 per day	6	8
Workers drawing more than Re. 1 per day	8	10

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